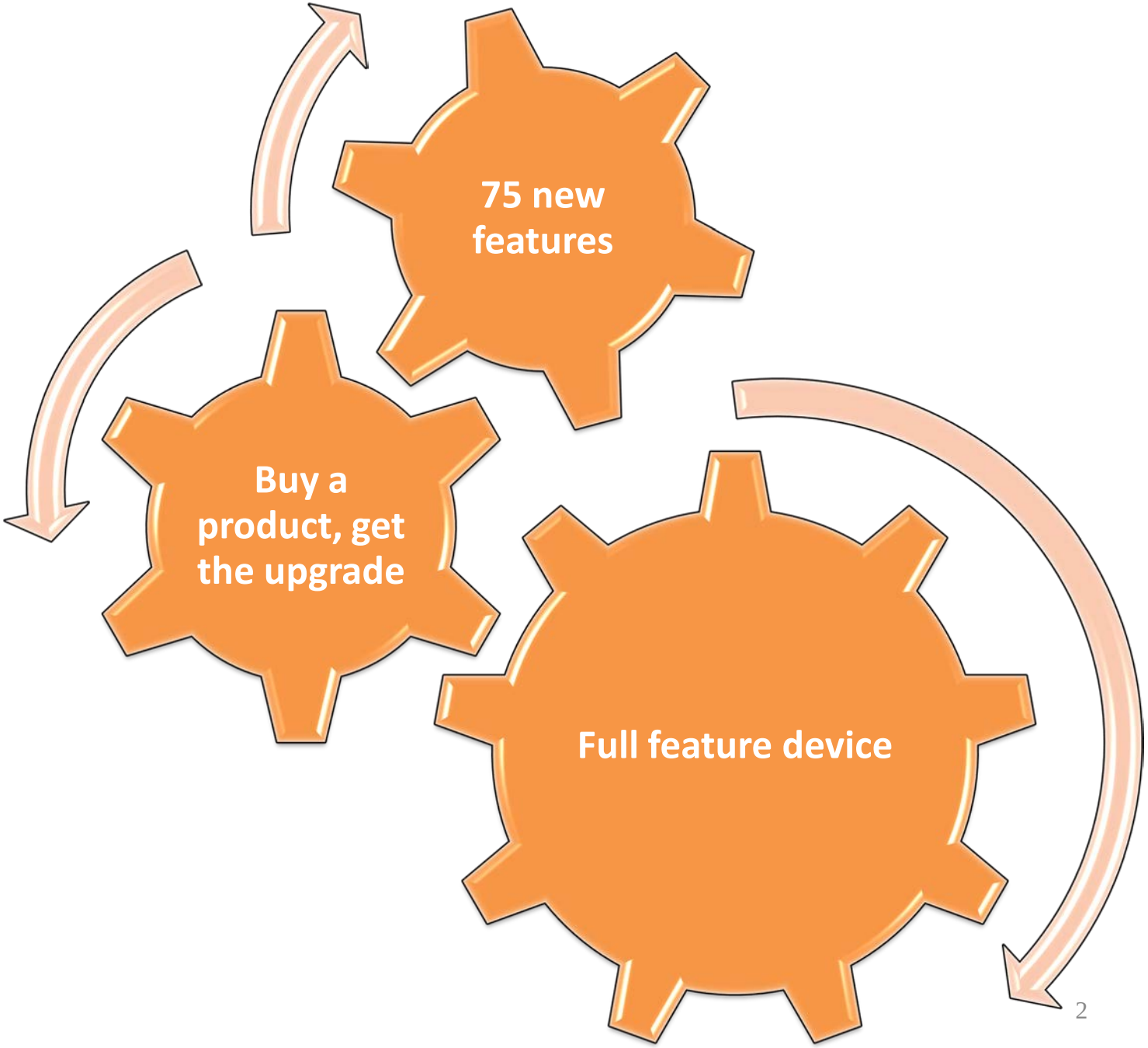
What's New in VEO Version 3.5.5

Eric Dusablon

27/11/2013


75 new features
Buy a product, get the upgrade
Full feature device

VEO List of Enhancements (1-25)

- Introduction of Zoom function into S-Scan, L-Scan
- New Welcome screen on boot and file load
- New Inspection Wizard to help setup of new configurations from scratch
- Inspection: Hide Voltage Mono in PA setup, and vice-versa
- View Layouts
  - New view layouts configurations, including layouts with 3d views
  - Views resizable with mouse
  - 2D C-Scan are rendered during acquisition (Live Merged C-Scan), #3609
  - Show if Top/End/C views are in depth or amplitude mode in layout image
- Part: New types of Welds (U-weld, J-weld)
- Part: Curved parts support in UT and TOFD:
  - New type of part added : “Inside Pipe (ID)” and “Outside Pipe (OD)”
  - Defect positioning on 3D curved part
  - Curve Part Measurement (Depth and Surface Distance considering curvature)
- Part: Part menu now before Probe menu.
- Part: Added Graphite/Epoxy to material list, #3661
- Probe: Spike mode support, a new parameter has been added in Mono probe menu: “Pulse Type”
- Probe: Allow changing Probe->Pulse Width in Play mode, #4902
- Probe/Wedge: New ".utprobe" and ".utwedge" extension for Probe and Wedge files.
- Wedge: simplified usage in Conventional/TOFD, only need to enter X-Offset and Refracted angle to have a functional wedge.
- Scan: Renamed Delay to Zero
- Scan: Added Contouring mode (as per MasterScan, SiteScan and D-Series)
- Scan: Addition of reject mode: Suppressive and Linear (as per MasterScan, SiteScan and D-Series)
- Scan: Show actual velocity value in Wave Mode list
- Scan: Smoothing now configurable to None, Low, Medium or High (previously only high was available)
- Scan: Re-ordered some parameters, especially Acquisition Freq from Inspection, now configurable per Scan
- Scan: Auto-Gain feature simplified. Simply hold dB button to set gain in current gate to the reference amplitude, usually 80%, or use the “Scan->Auto FSH%” button.

VEO List of Enhancements (26-49)

- Wizards: DGS enhancement
  - Halve the lowest allowed ERS (equivalent reflector size), and use a more fine-grained DGS resolution, #4489
  - Enhance curve drawing; continue calculating points in the entirelistening window.
  - Add “material attenuation” to DGS wizard
  - Add “Split DGS” enhancements
  - Add a “DGS Options” section into Scan to ease control without entering wizard
  - Add "Curve Ref Correct" into “DGS Options” section to allow/disallow curve displacement when changing gain
- Wizards: DAC enhancement
  - Add “Split DAC” enhancements
  - Add a “DAC Options” section into Scan to ease control without entering wizard
  - Add "Curve Ref Correct" into “DAC Options” section to allow/disallow curve displacement when changing gain (Dynamic DAC)
  - Allow gain adjustment during and after DAC wizard
- Wizards: allow access in STOP mode when config is valid
- Wizards: when setup is mono only, hide wizards that don’t apply
- Wizards: Add gain at final step of Velocity and Zero wizard, #3020
- Wizards: Correction of TCG during calibration (allow to change gain)
- Wizards: help panel can be hidden with F1 to have more view space while calibrating
- 3d view: Redesigned 3D views
  - Bottom-right view shows different visual contexts depending on the selected tab
  - Clearer representation of probe and part
  - Many new sizing measures displayed directly in 3D view
  - Phased Array: Graphical representation of RX delay in 3D views
  - UT: Curve part Rendering
  - HAZ: Heat-Affected Zone
  - Add stream direction.
- View: Time-based ruler, #4592
- View: New grid type: Dots (Graticules)

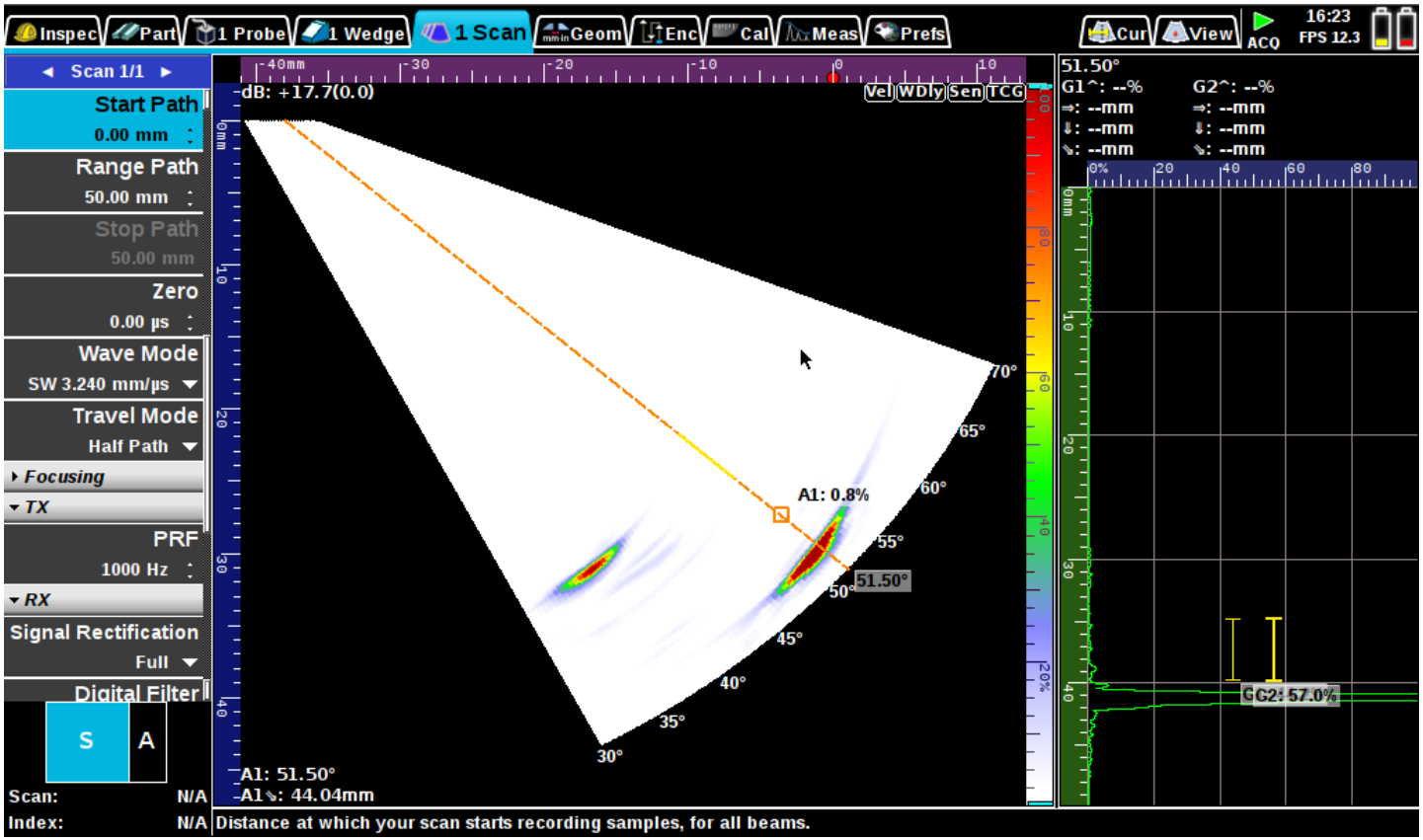
VEO List of Enhancements(50-75)

- View: Reference A-Scan
  - Save Reference A-Scan (A-Log) into configuration file (.UTCFG)
  - Export Reference A-Scan (A-Log) into CSV file
- View: UT, B-Log Live (Live thickness logging with part profile)
- View: 2D C-Scan are rendered during acquisition (Live Merged C-Scan)
- View: Dual Polarity Gate/Box: added as view option when scan is not rectified, controls how C-Scans, Top and End views are extracted (positive, negative or RF spectrum).
- View: Addition of fixed depth palette, can be extended out of min/max range.
- View: The B-Scan now supports 2 rendering modes (fit or scroll)
- View: Can be resized with mouse.
- Prefs: “Auto-hide menus” option to enable a maximal view area in PLAY
- Prefs: Software updates is now achieved from the application (with a single button push)
- Network: Acquisition files shared through FTP server.
- Report: Add Amplitude Tolerance for Sensitivity and TCG calibrations
- Config Summary: Added Part velocity, X-Offset
- Config Summary: Show errors and tips at top of window instead of bottom.
- Media browser: Improved media browser workflow (saving and loading files is now much easier)
- Media browser: Clearer display of all available drives.
- Media browser: Remember last Drive, Sorting and Filter.
- UI: Show full-length value when value is too large to fit
- UI: Display FPS (Frame per Second) and PRF (Pulse Repetition Frequency) in top right corner of user interface
- UI: User Interface green when using a conventional scan
- UI: PDF viewer: remember page if re-opening same document
- UI: Add Hungarian translation.
- UI: Add Italian translation.
- Defect Table (UTStudio only)
- HTT: better and more detailed hardware tests
- HTT: Added support for new HW test kit (HTTV3)

Phased Array

Zoom (L/S-Scan)

- *Enhance resolution into "Region of Interest" (ROI)*



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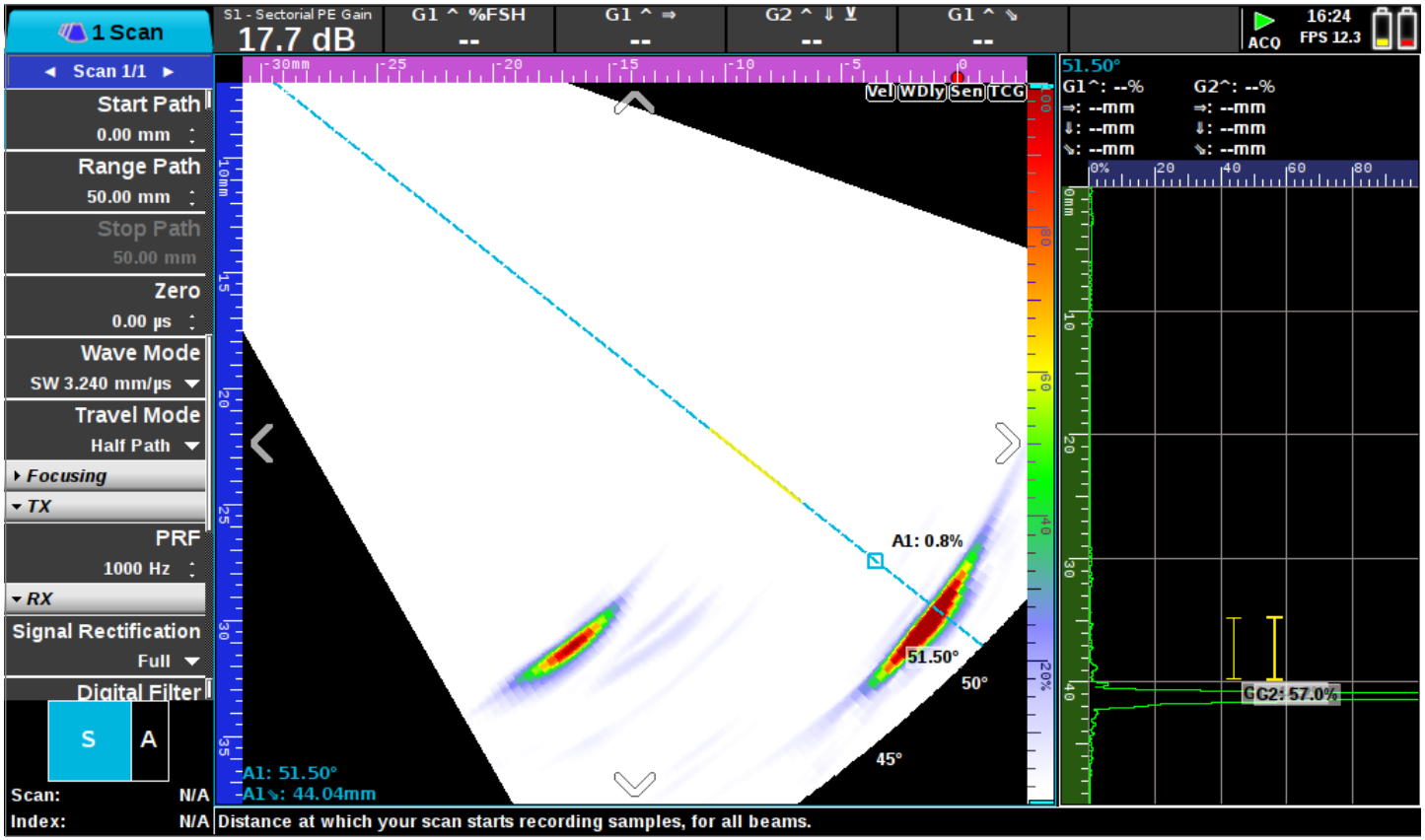

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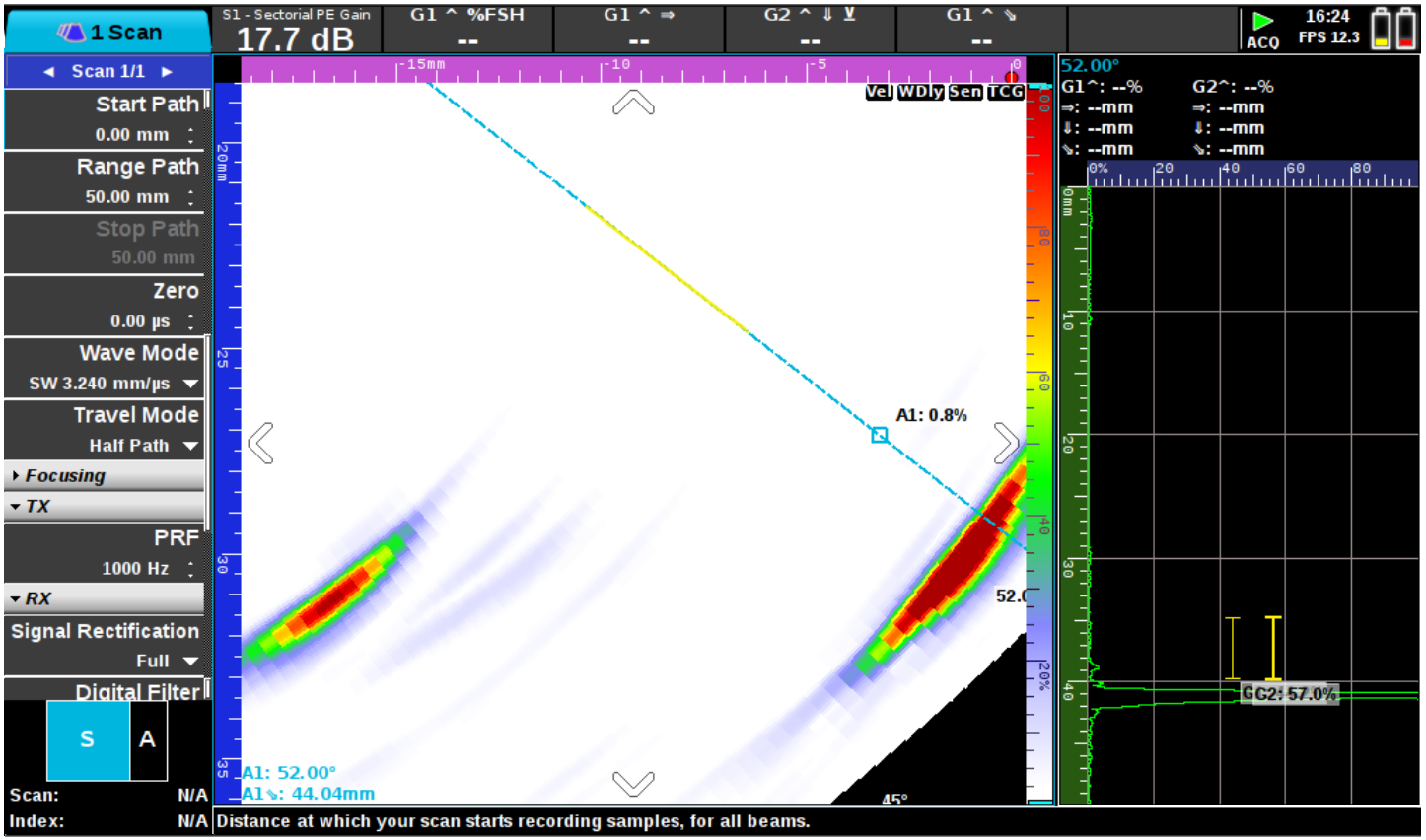
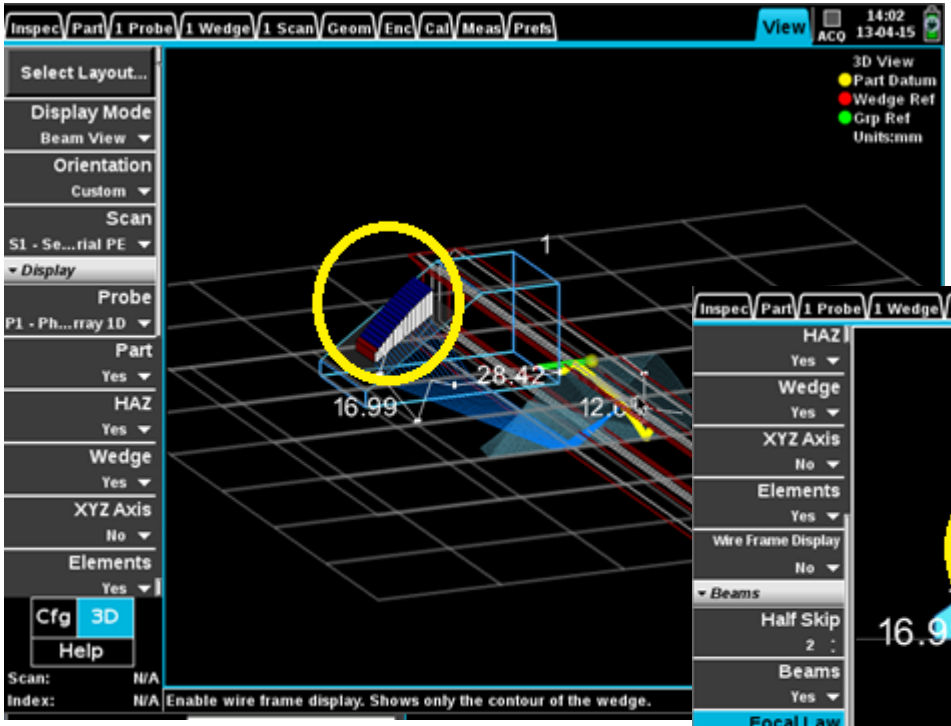
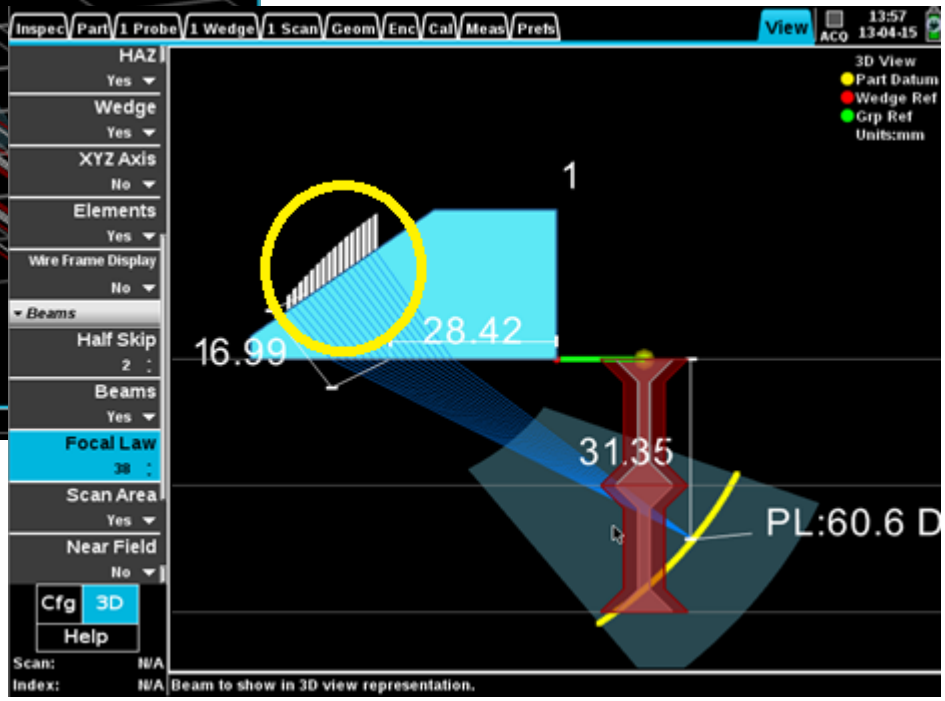


Phased Array: Graphical representation of RX delays in 3D views

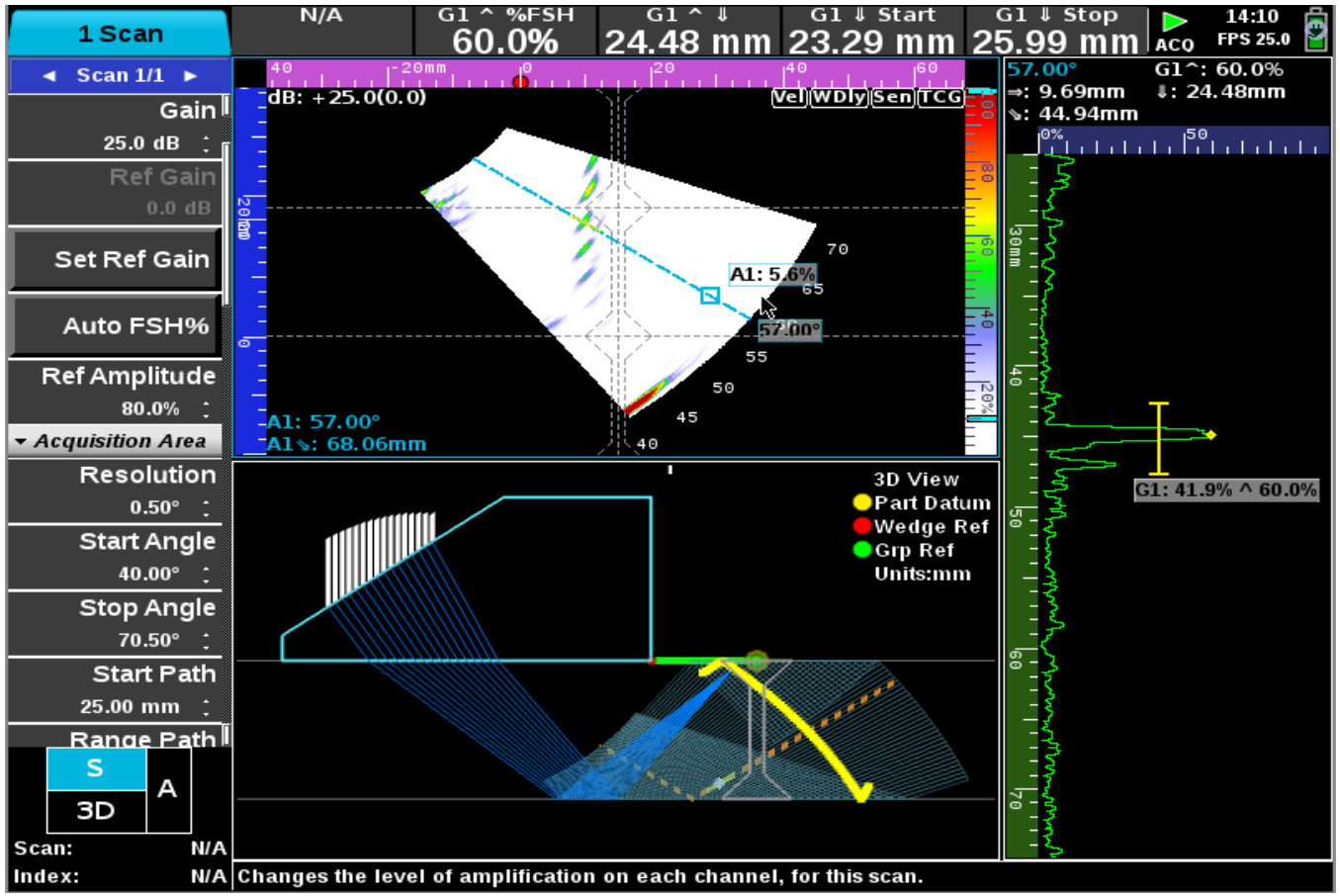
- *Great pedagogic tool*
- *Fast and quick look to the elements used by the setup*
- *Add relevant measurements*





Phased Array: Graphical representation of RX delays in 3D views (live)

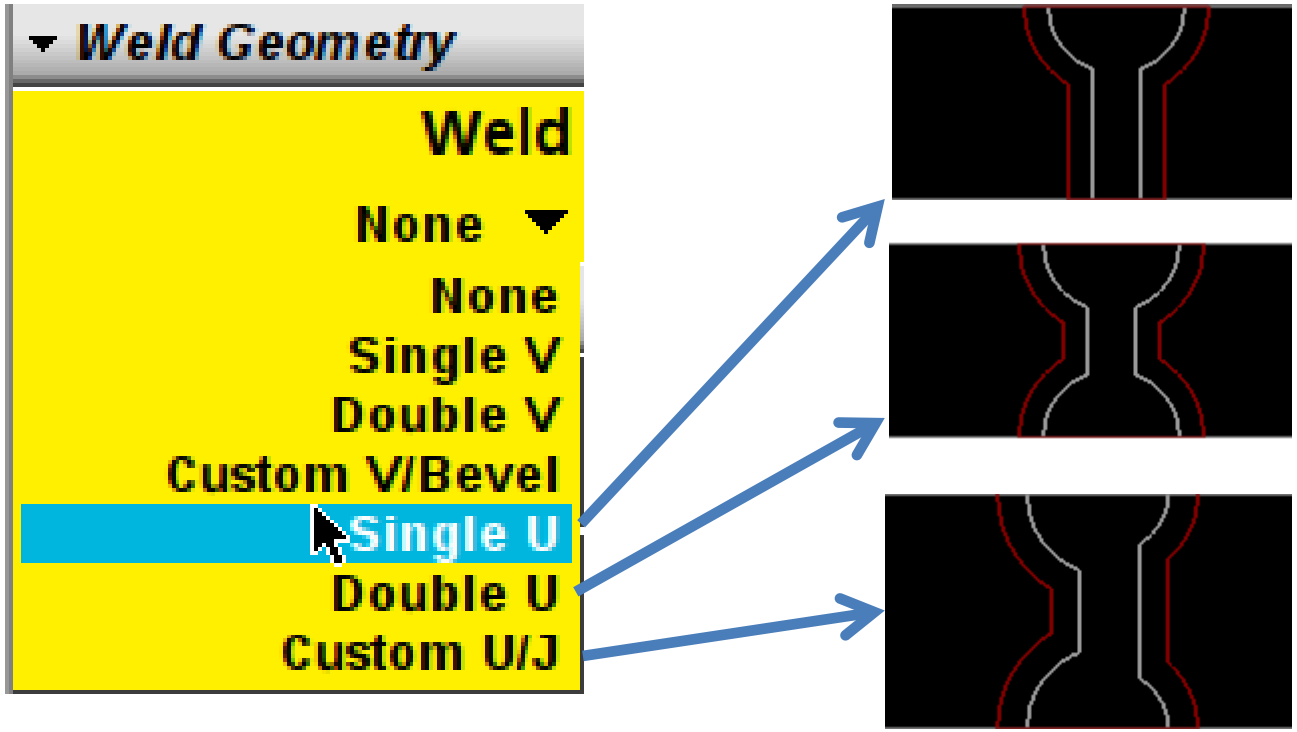
- *Understand part and defect position*



Phased Array Conventional UT

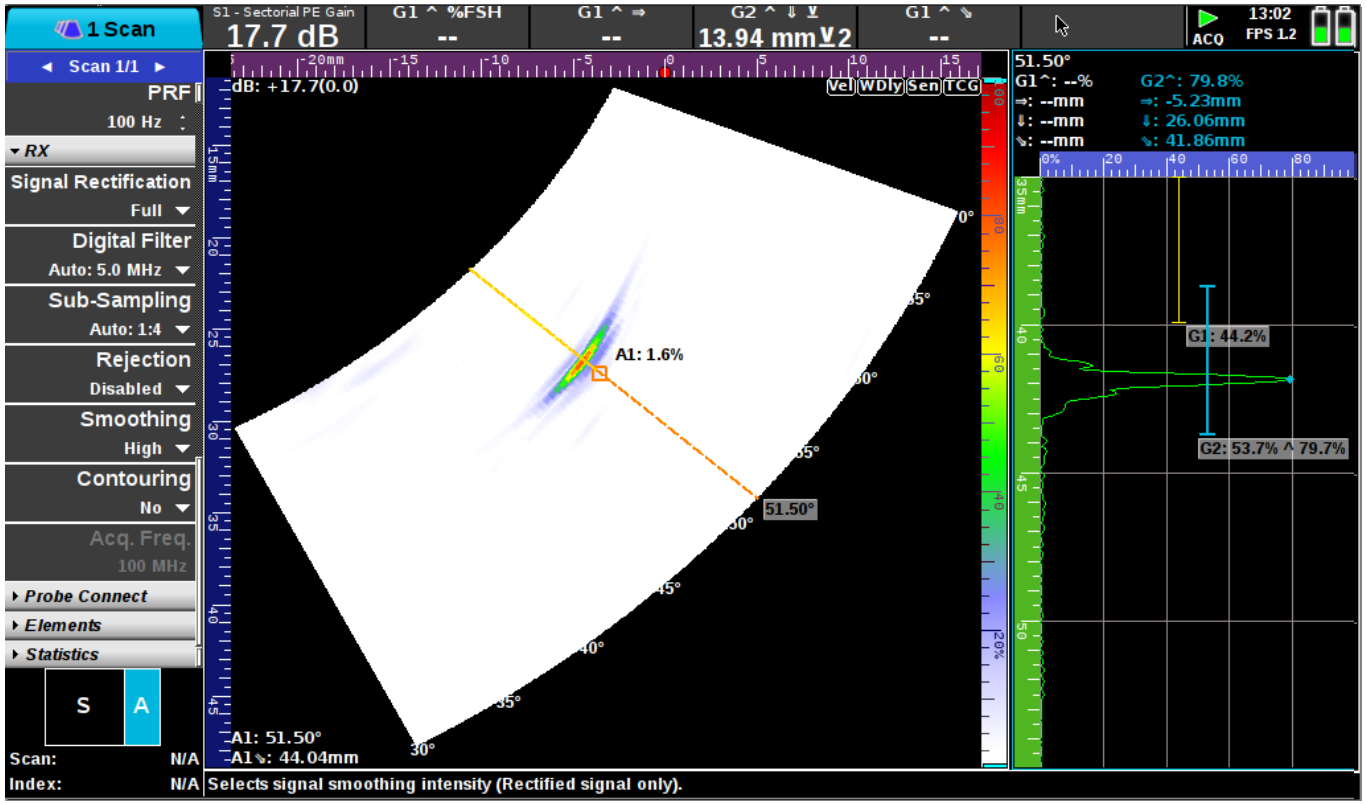
New Weld type (U-weld, J-weld)

- *One more step to represent the real part*



Smoothing now configurable to None, Low, Medium or High

- *Choose the right smoothing level for your probe frequency*



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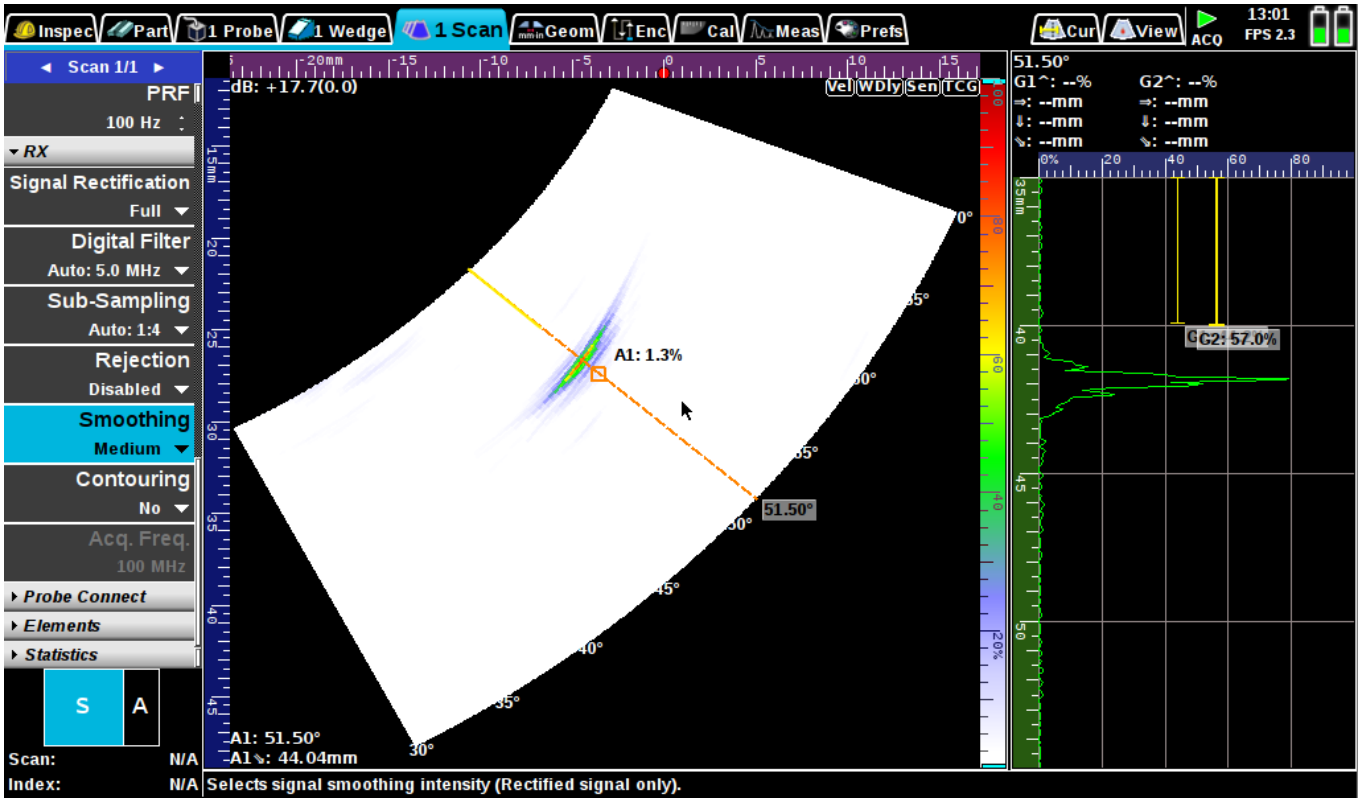

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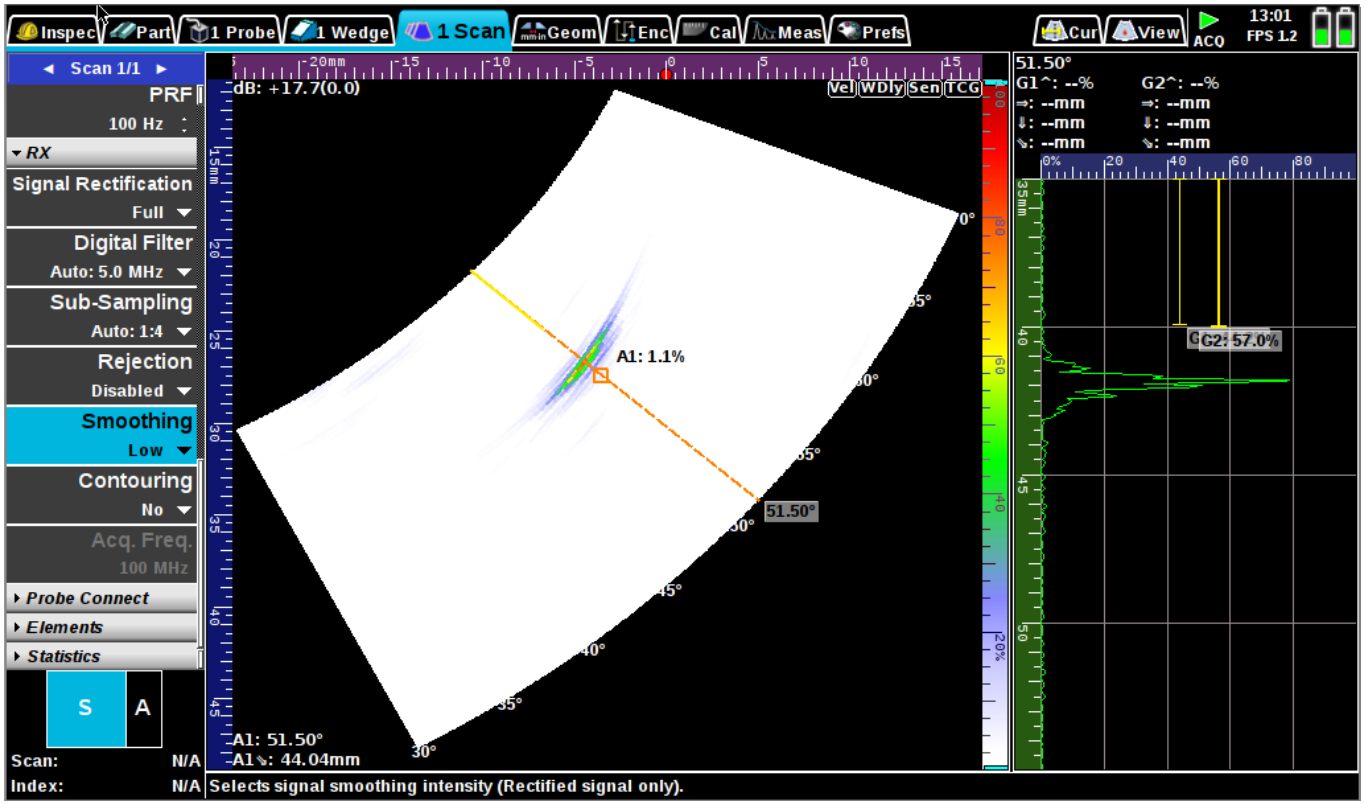
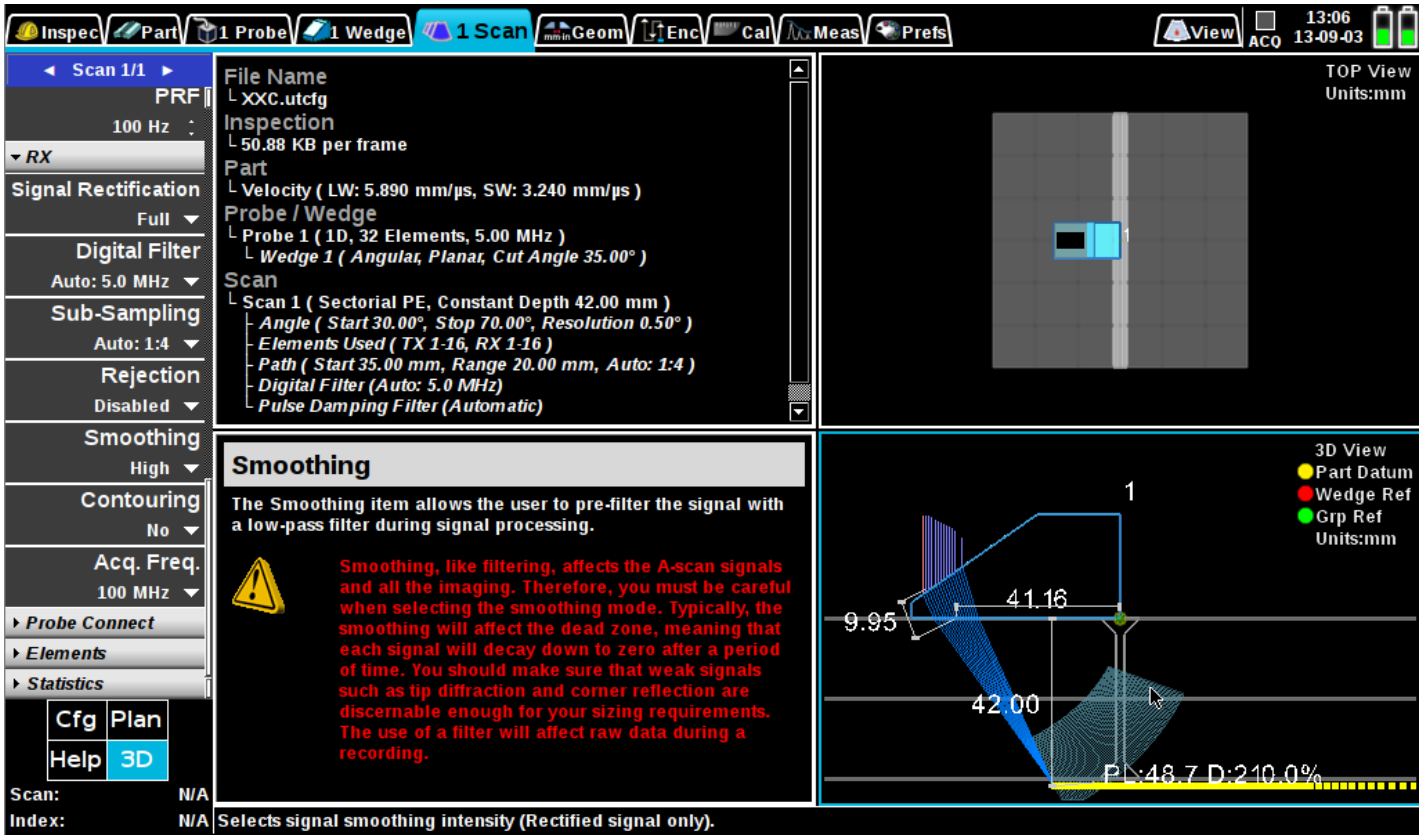


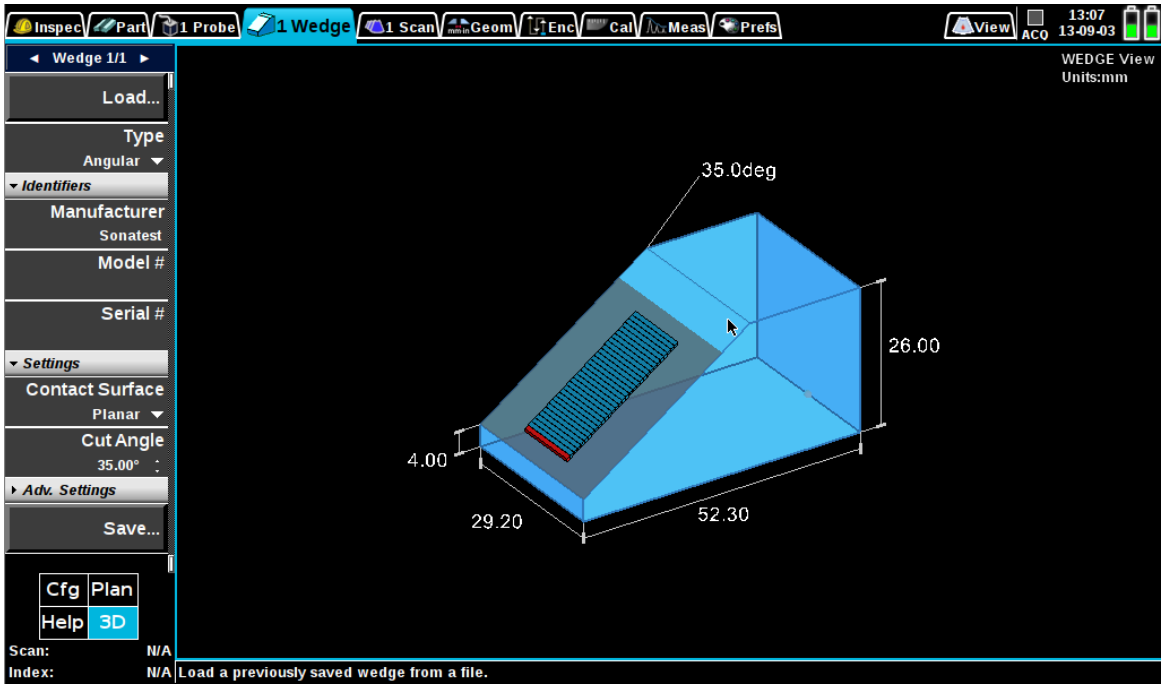
Redesigned 3D views

- *Bottom-right view shows different visual contexts depending on the selected tab*



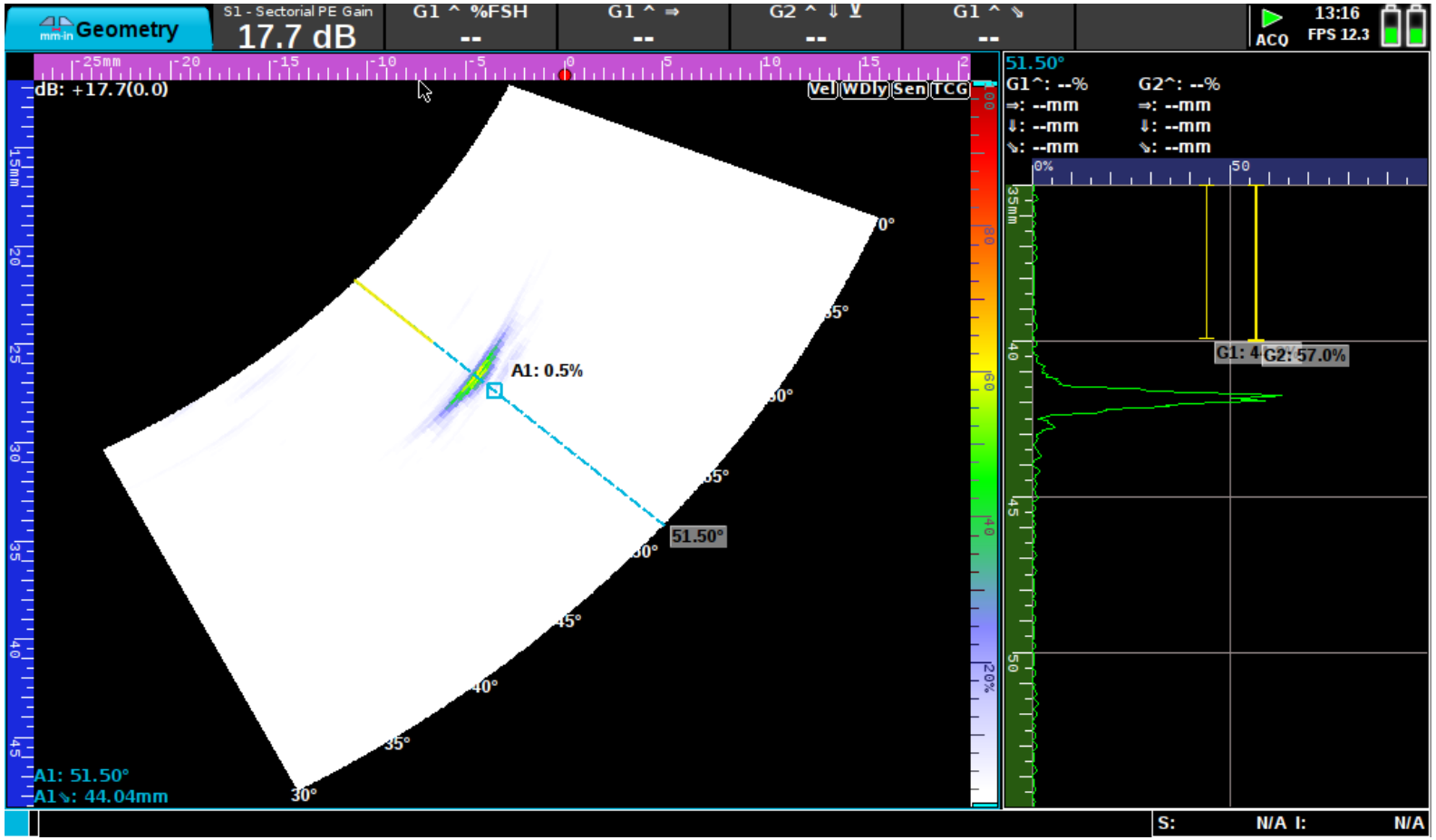
Redesigned 3D views

- *Clearer representation of probe, wedge part and part*
- *Many new sizing measures displayed directly in 3D view*



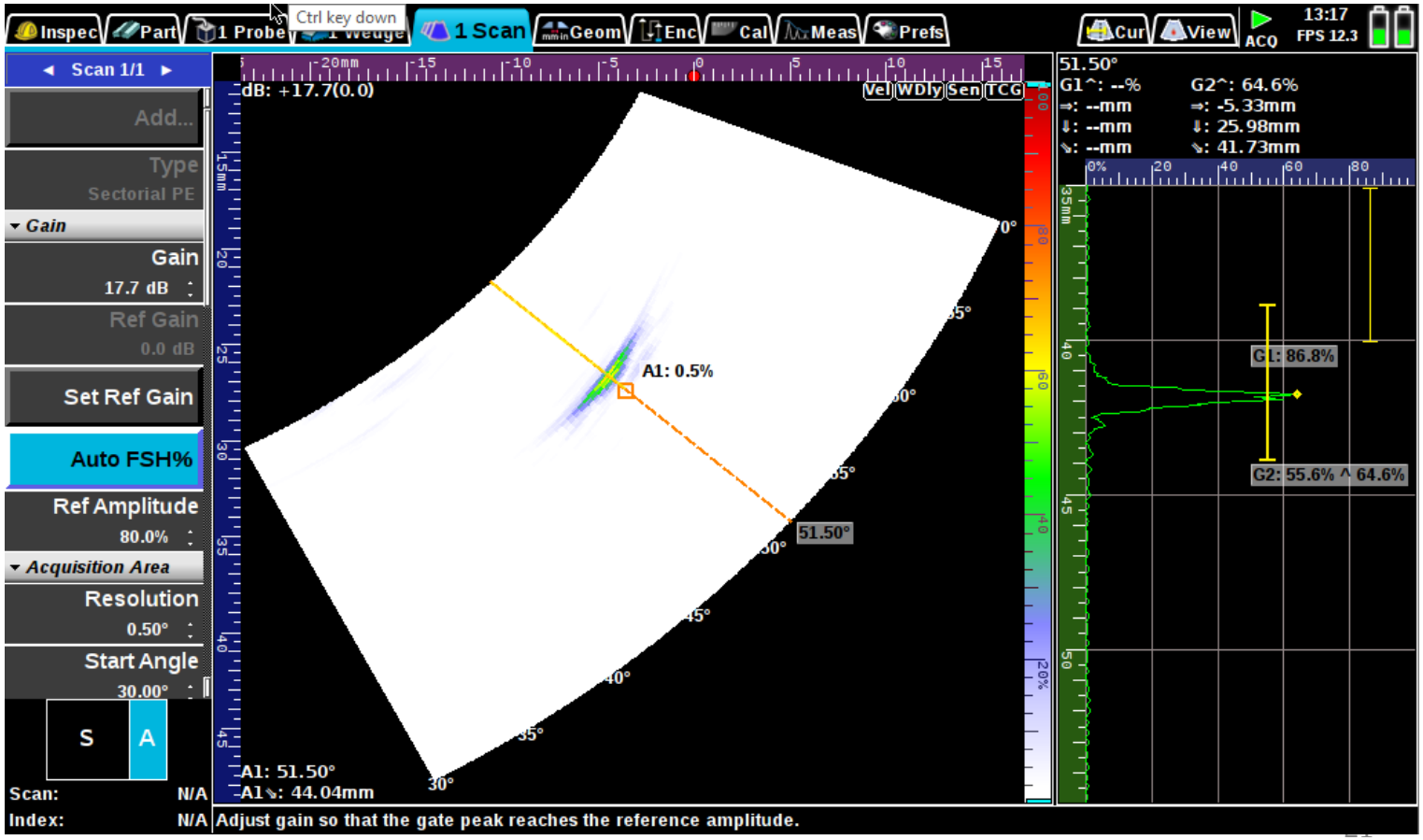
Full Screen Mode

- *Prefs: "Auto-hide menus" option to enable a maximal view area in acquisition*
- *Better viewability when using a multi-group setup*



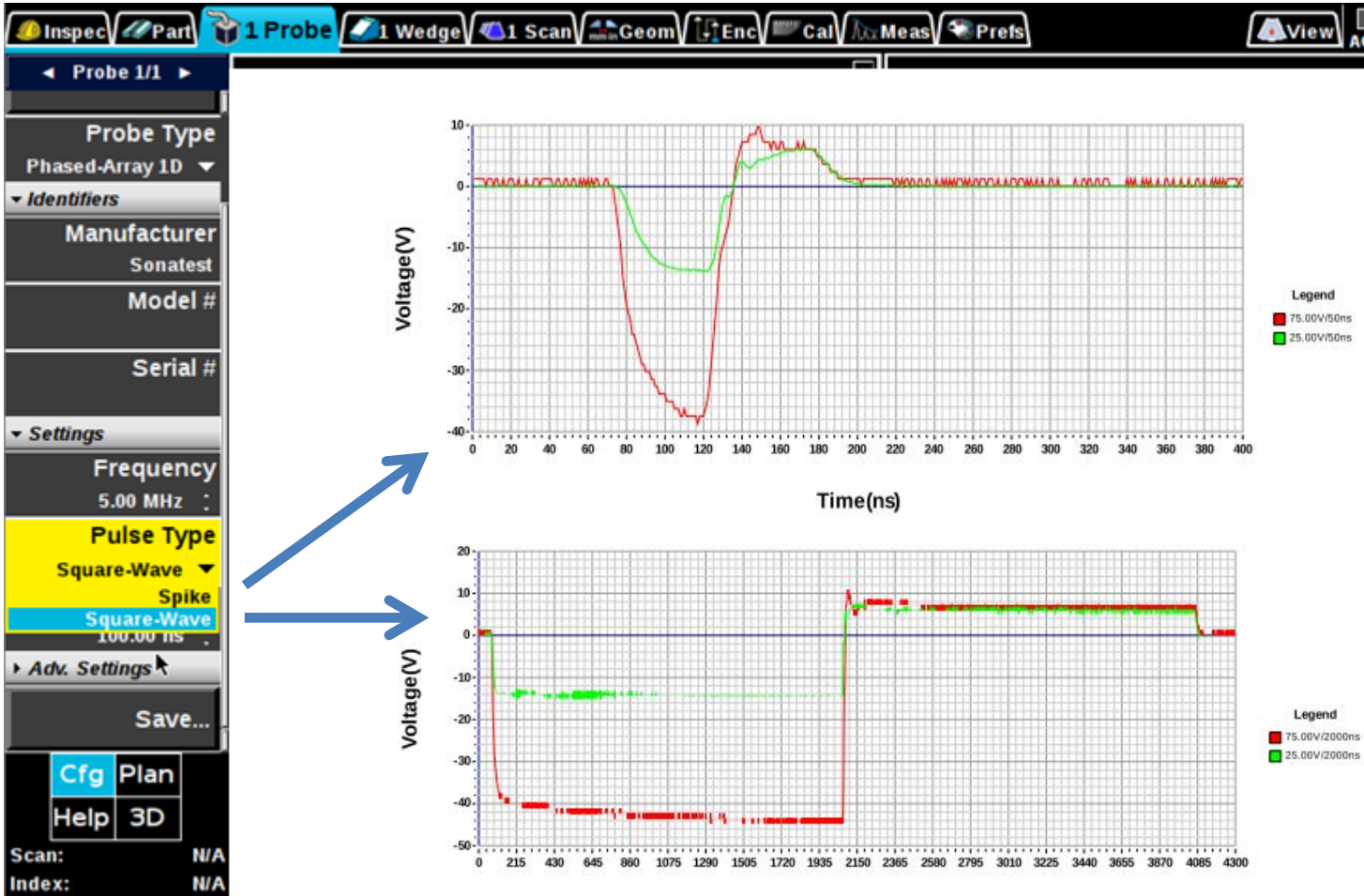
Auto-Gain feature simplified

- *Simply hold dB button to set gain in current gate to the reference amplitude (usually 80%)*
- *or use the "Scan->Auto FSH%" button.*



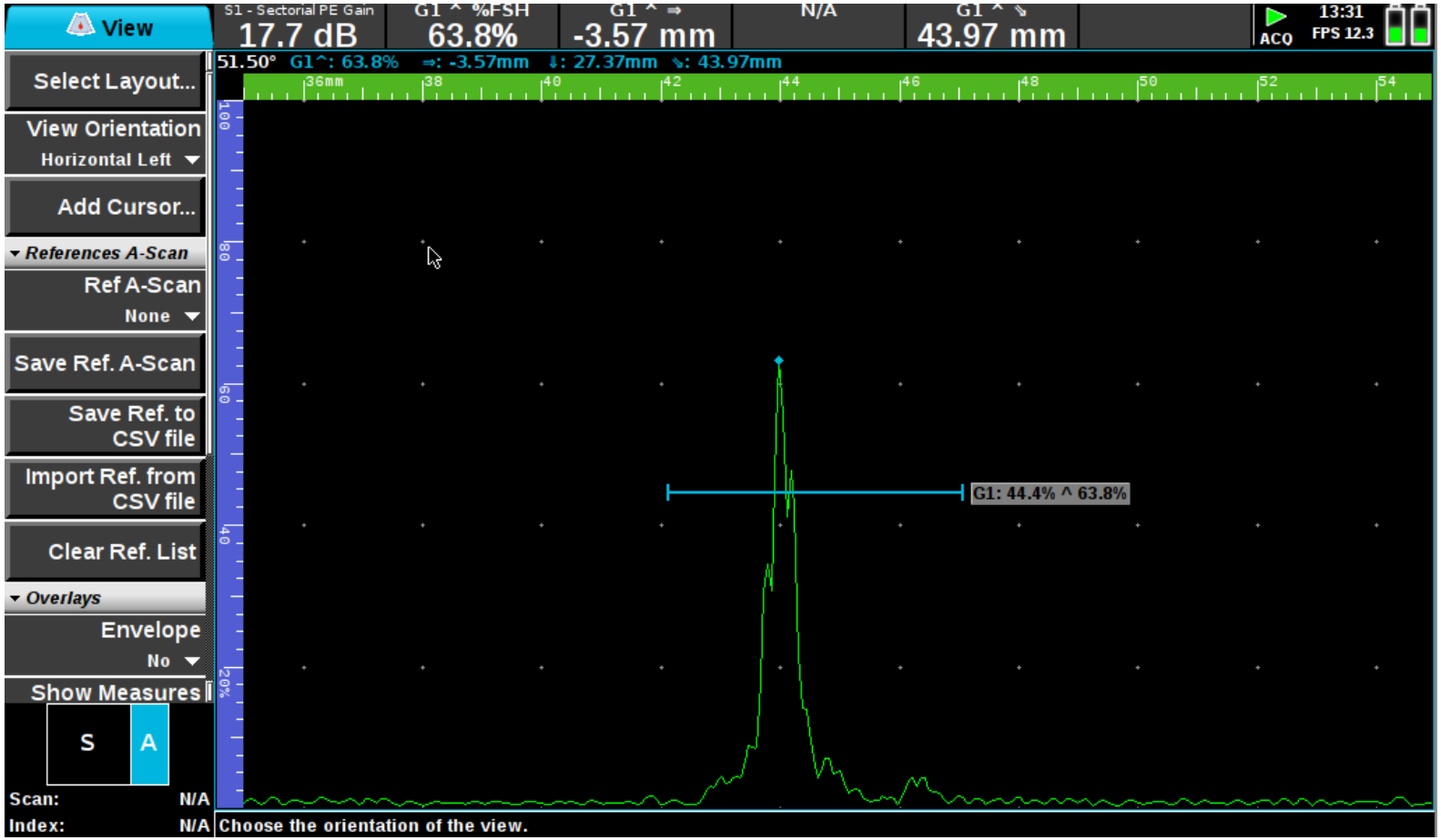
Spike Pulse mode support

- *New parameter has been added probe menu: "Pulse Type"*
- *Reduce Amplitude of reflector but increase SNR*



New grid type: Dots (Graticules)

- *Light weight grid*



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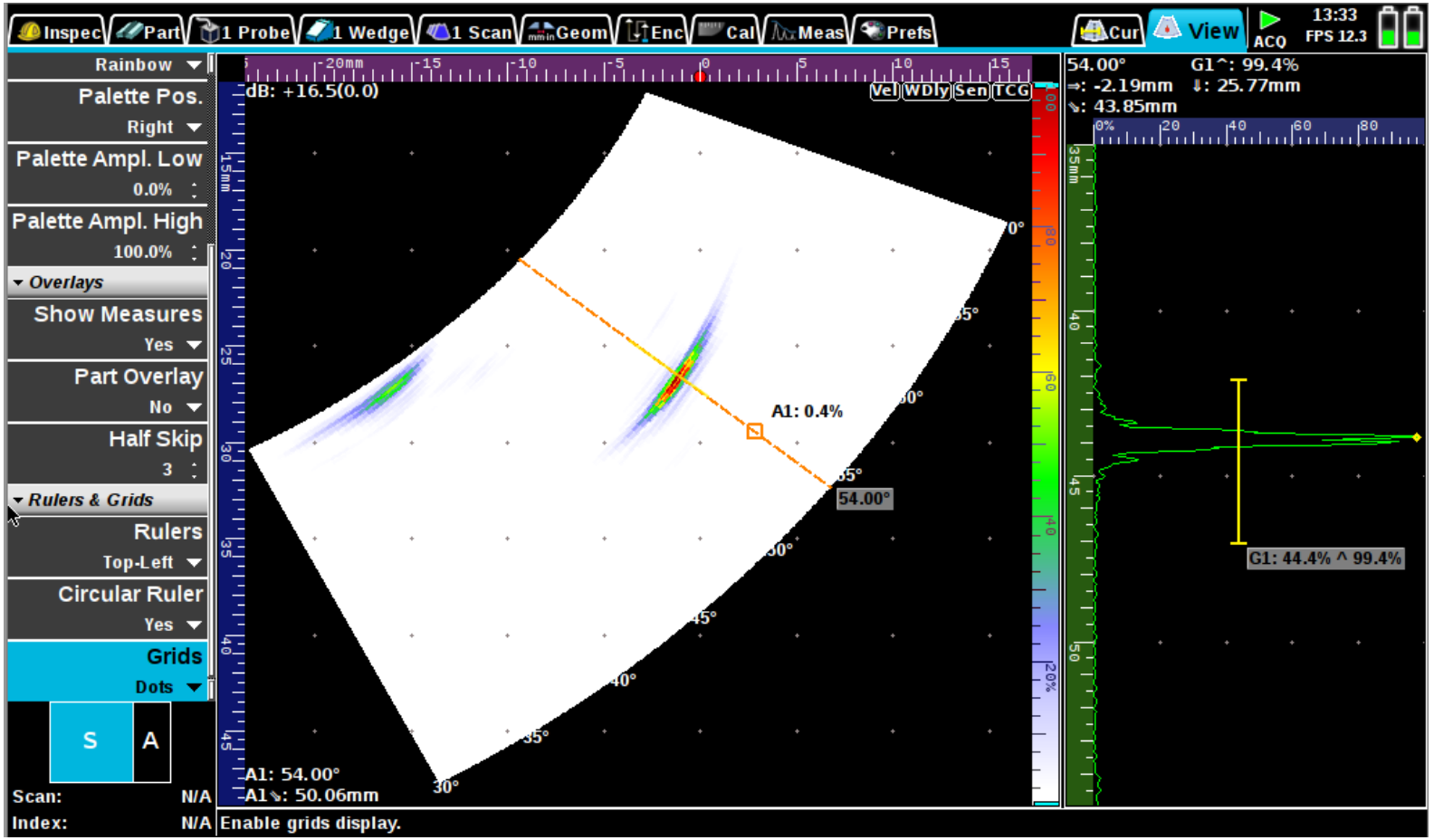
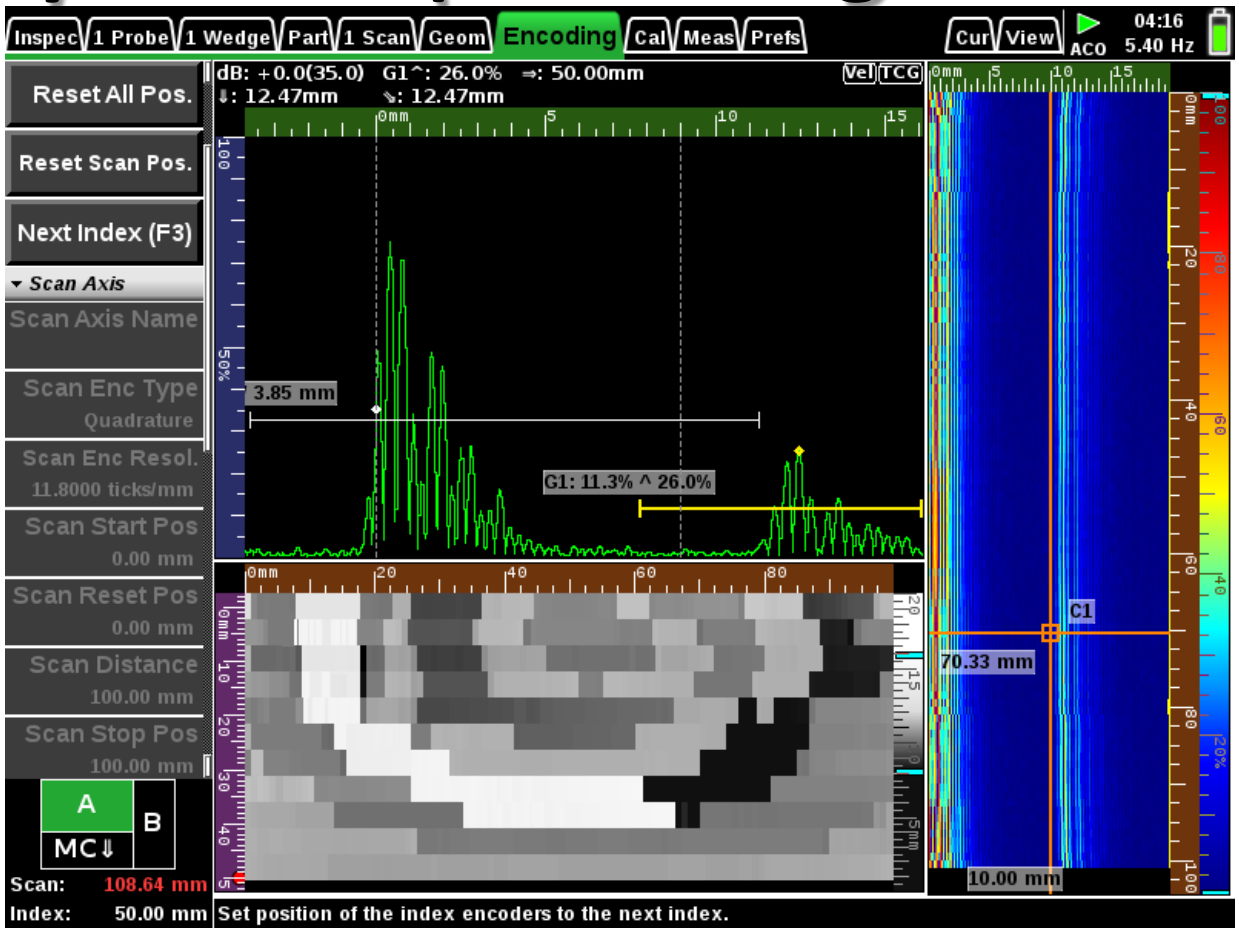
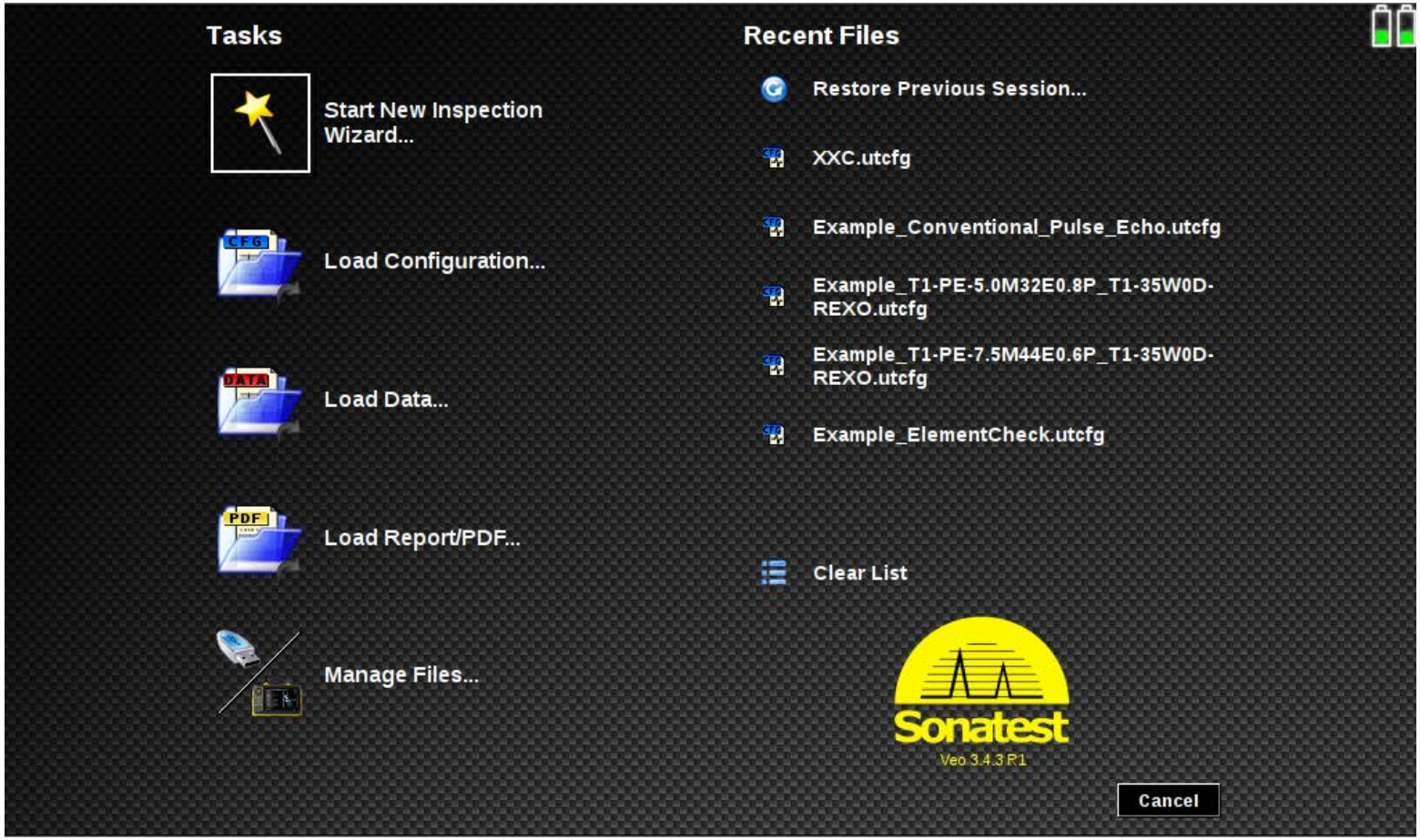


2D C-Scan are rendered during acquisition (Live Merged C-Scan)



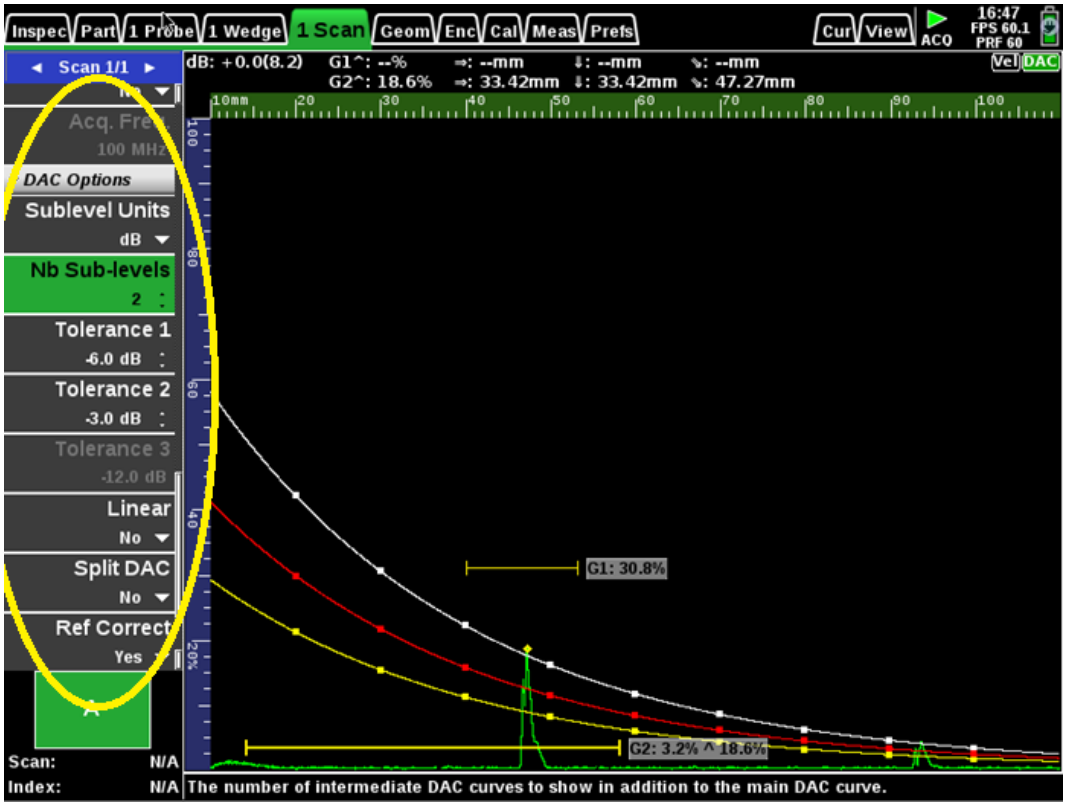
New Inspection Wizard

- *To help setup of new configurations from scratch*



DAC/DGS Sub-Menu

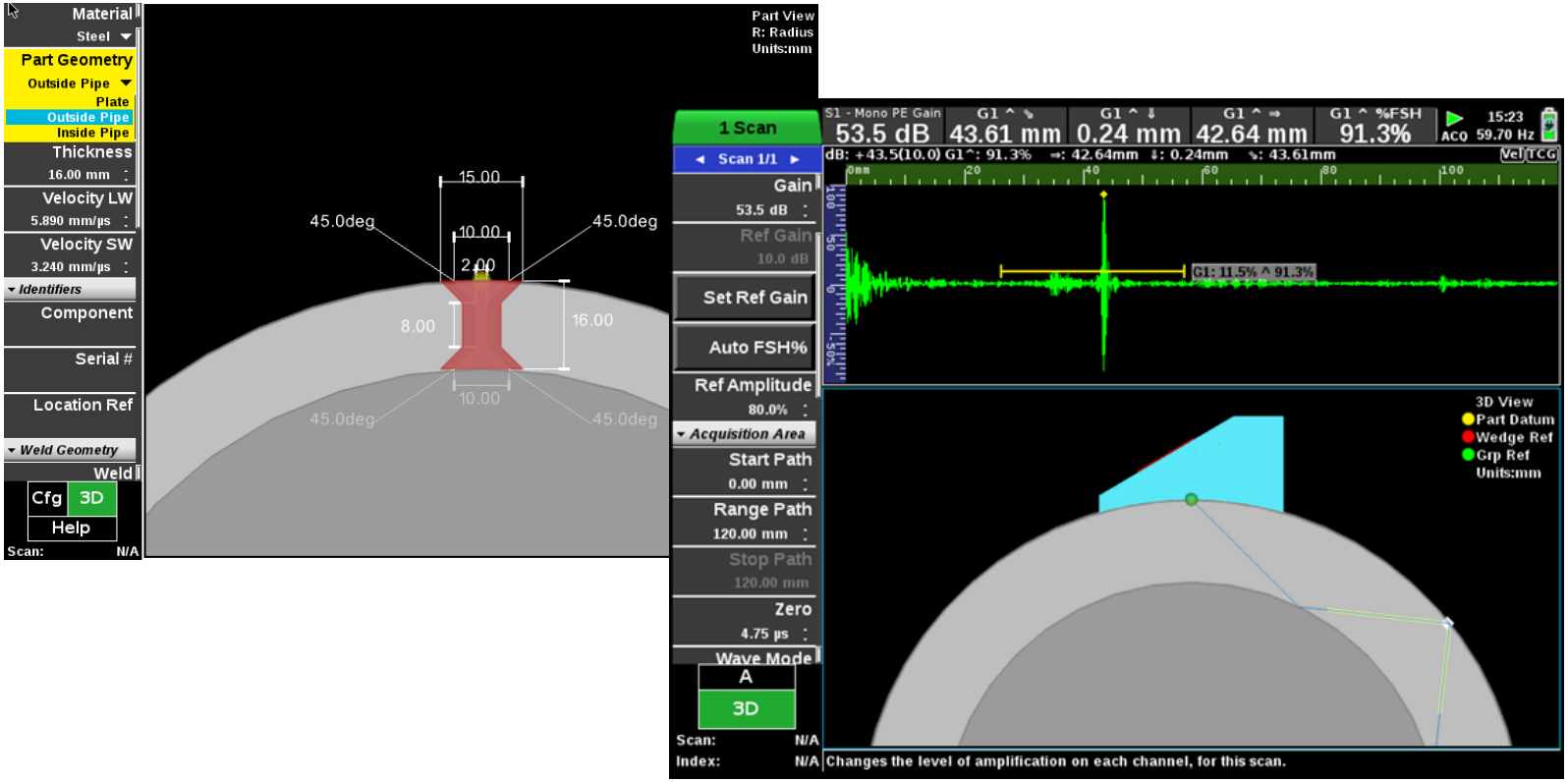
- *No need to run the wizard to change some useful DAC or DGS parameters*
- *"Ref Correct" allows moving the curves when gain is changed*



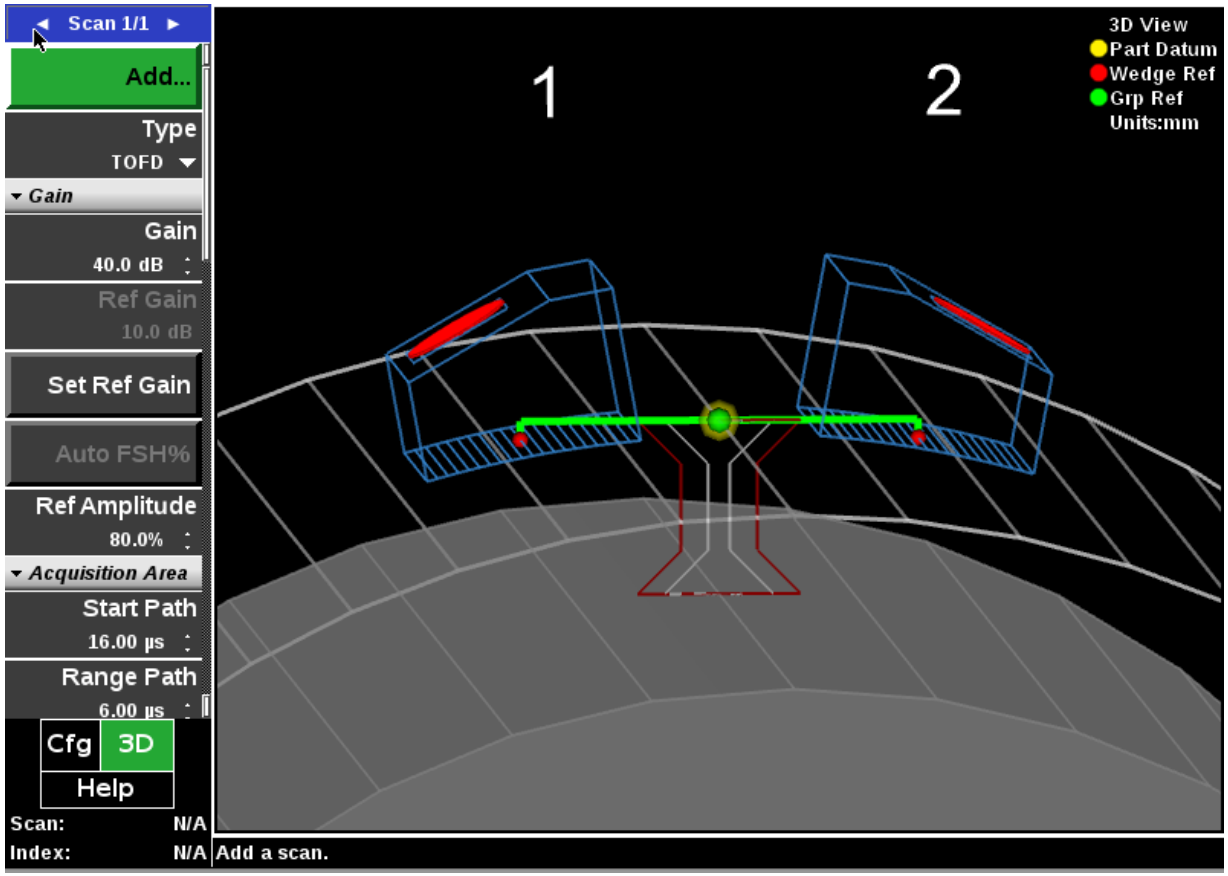
Conventional UT

Curved Part in UT

- *New type of part added : “Inside Pipe (ID)” and “Outside Pipe (OD)”*
- *Axial and Circumferential Weld*
- *Defect positioning on 3D curved part*
- *Curved Part Measurement (Depth and Surface Distance considering curvature)*

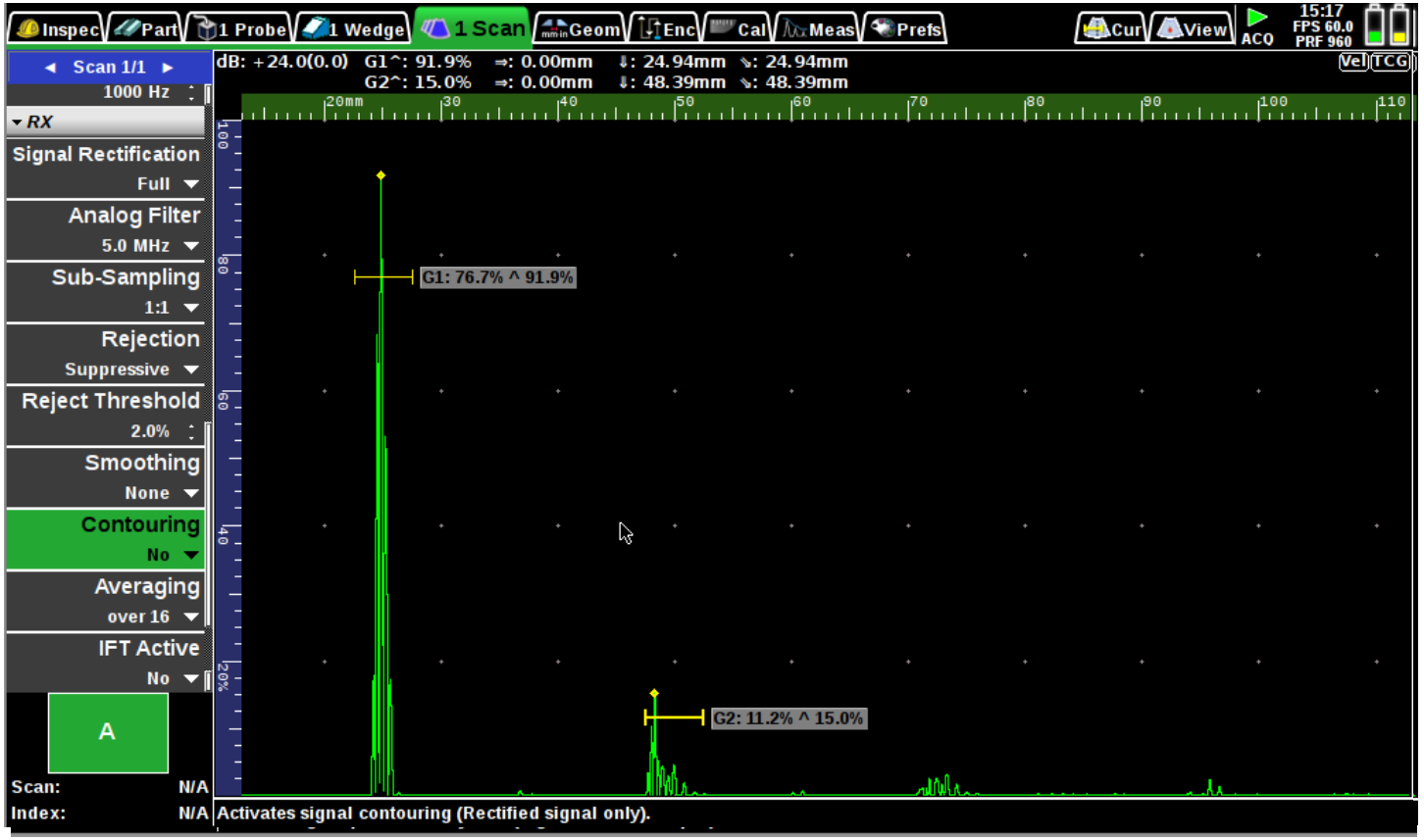


Curved Part in TOFD



Contouring mode (as per MasterScan, SiteScan and D-Series)

- *Contouring makes it easier to set repeatable gate levels on corroded steel plate.*
- *Thickness readings can be more consistent, because the leading edge of a pulse is easier to discriminate.*



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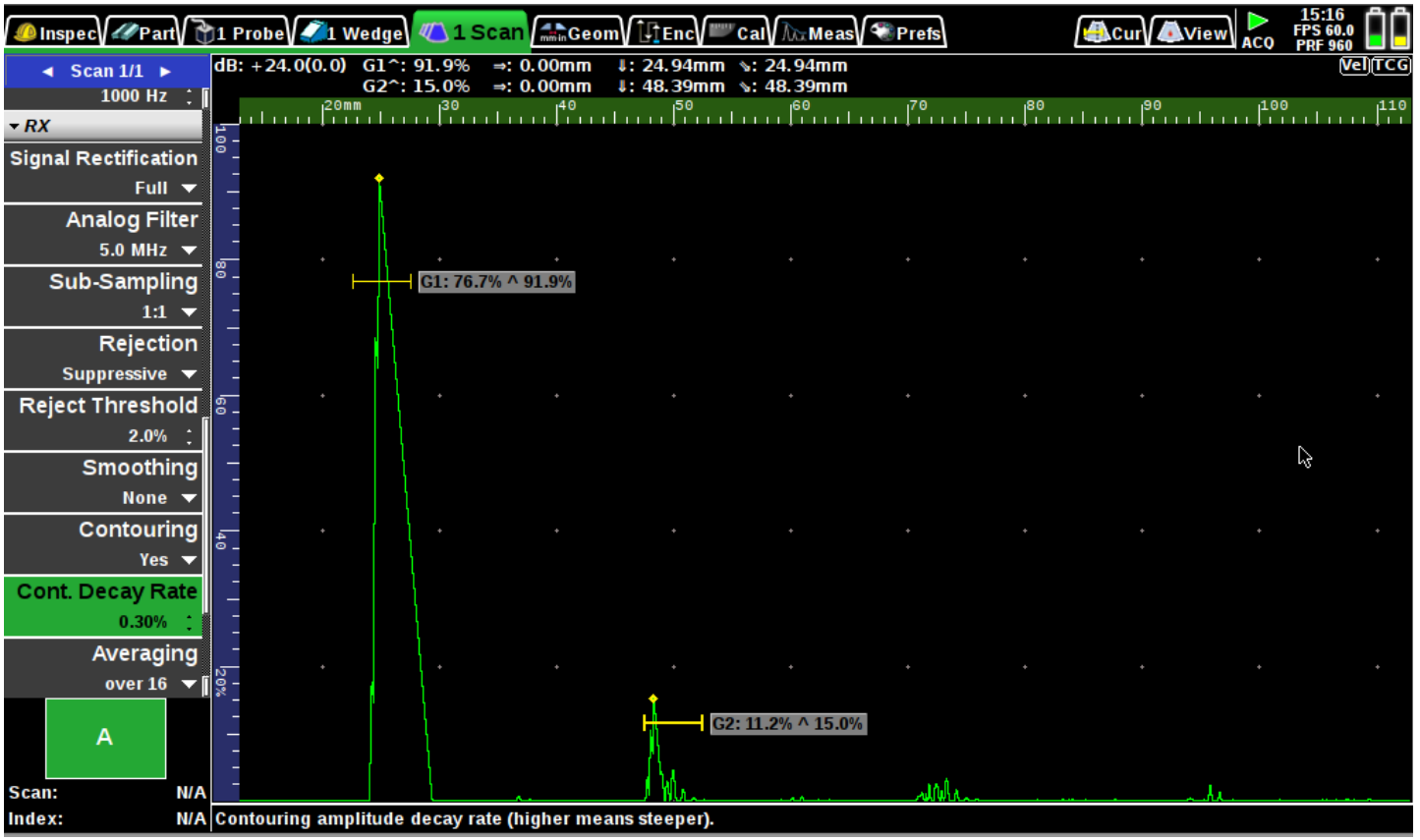

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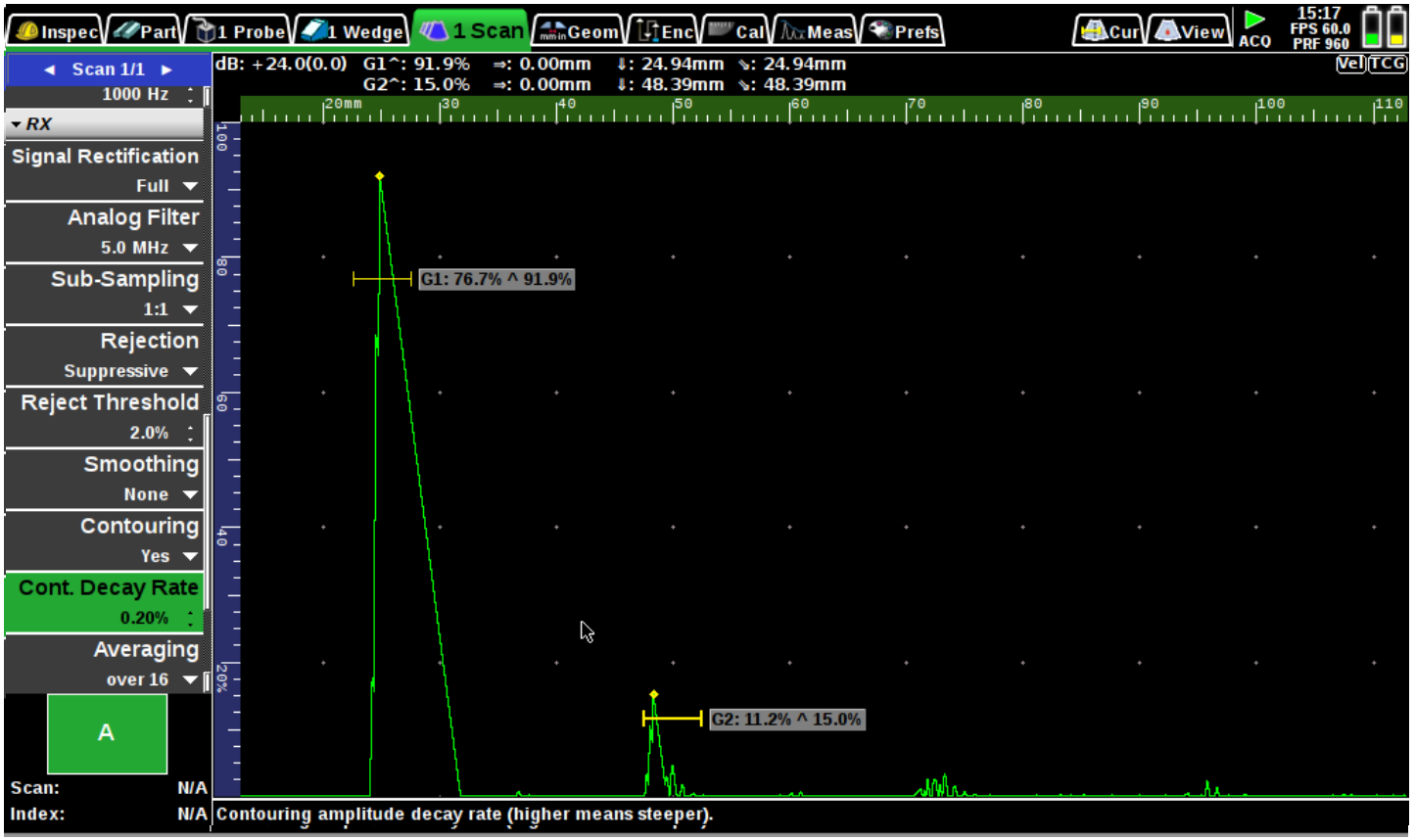
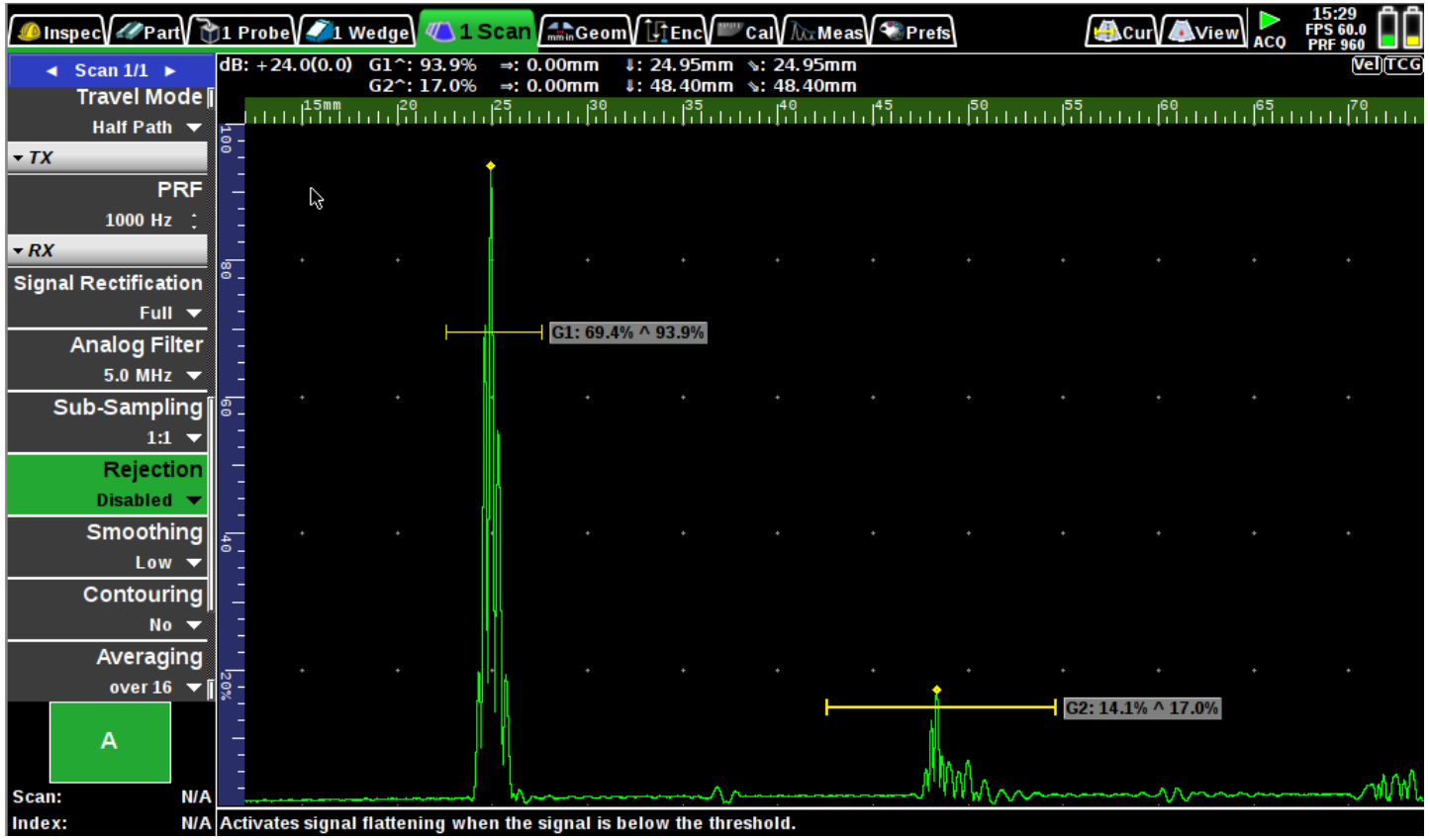


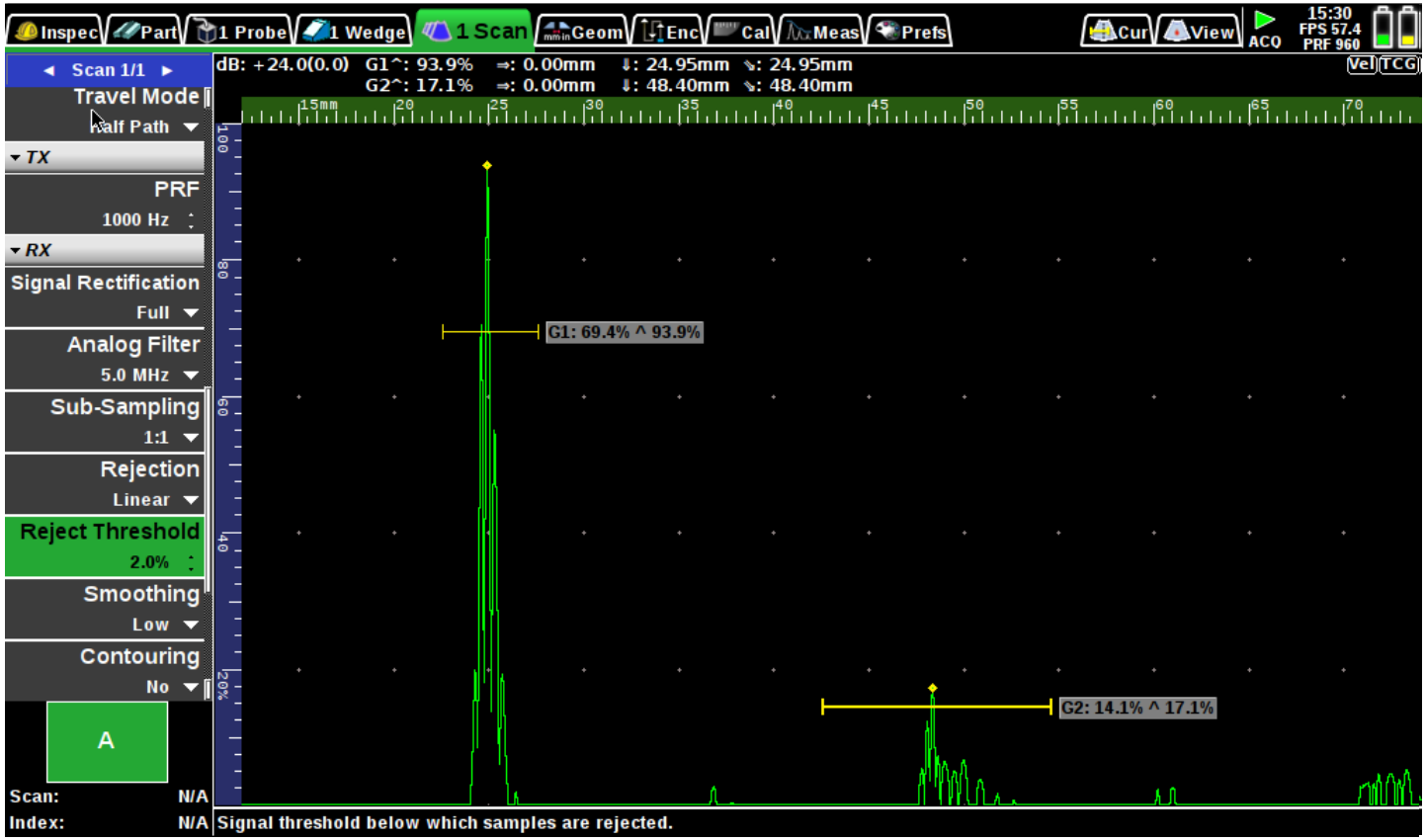
Add reject mode (as per MasterScan, SiteScan and D-Series)

- *Normal*



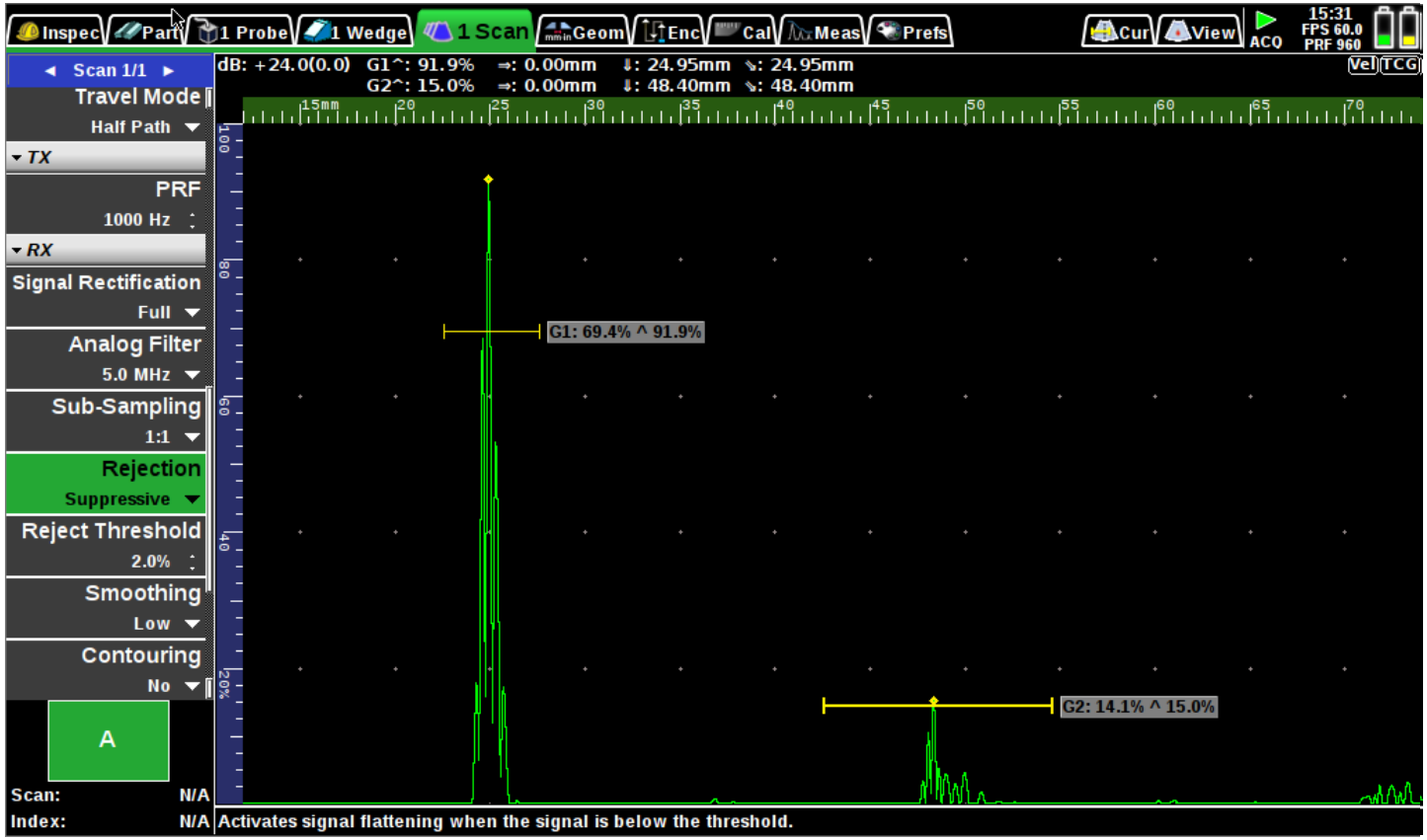
Add reject mode (as per MasterScan, SiteScan and D-Series)

- *Linear allow to substract ground noise*



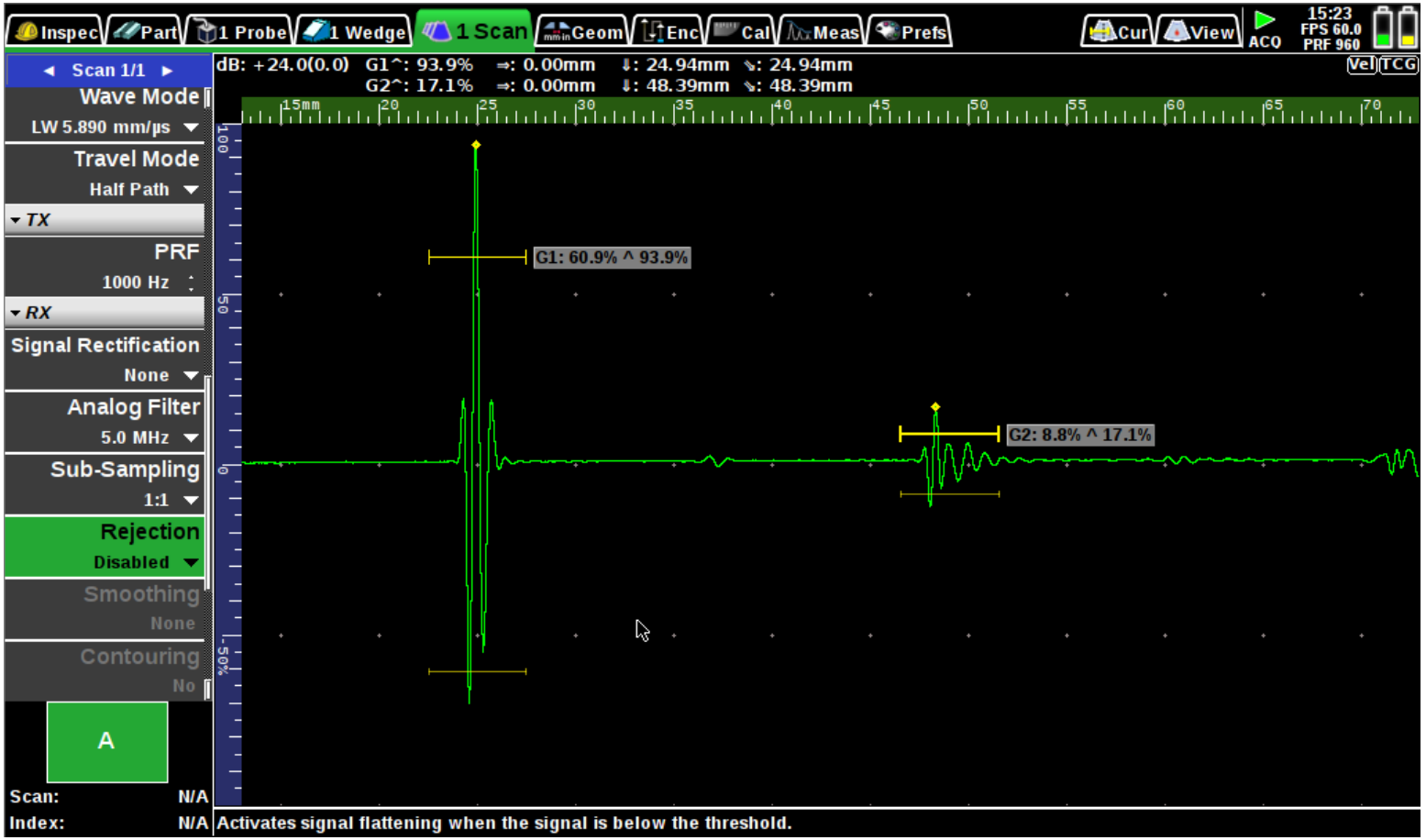
Add reject mode (as per MasterScan, SiteScan and D-Series)

- *Suppressive allow to substract a constant value*



Dual polarity gate

- *Evaluate positive / negative or both peak polarity*



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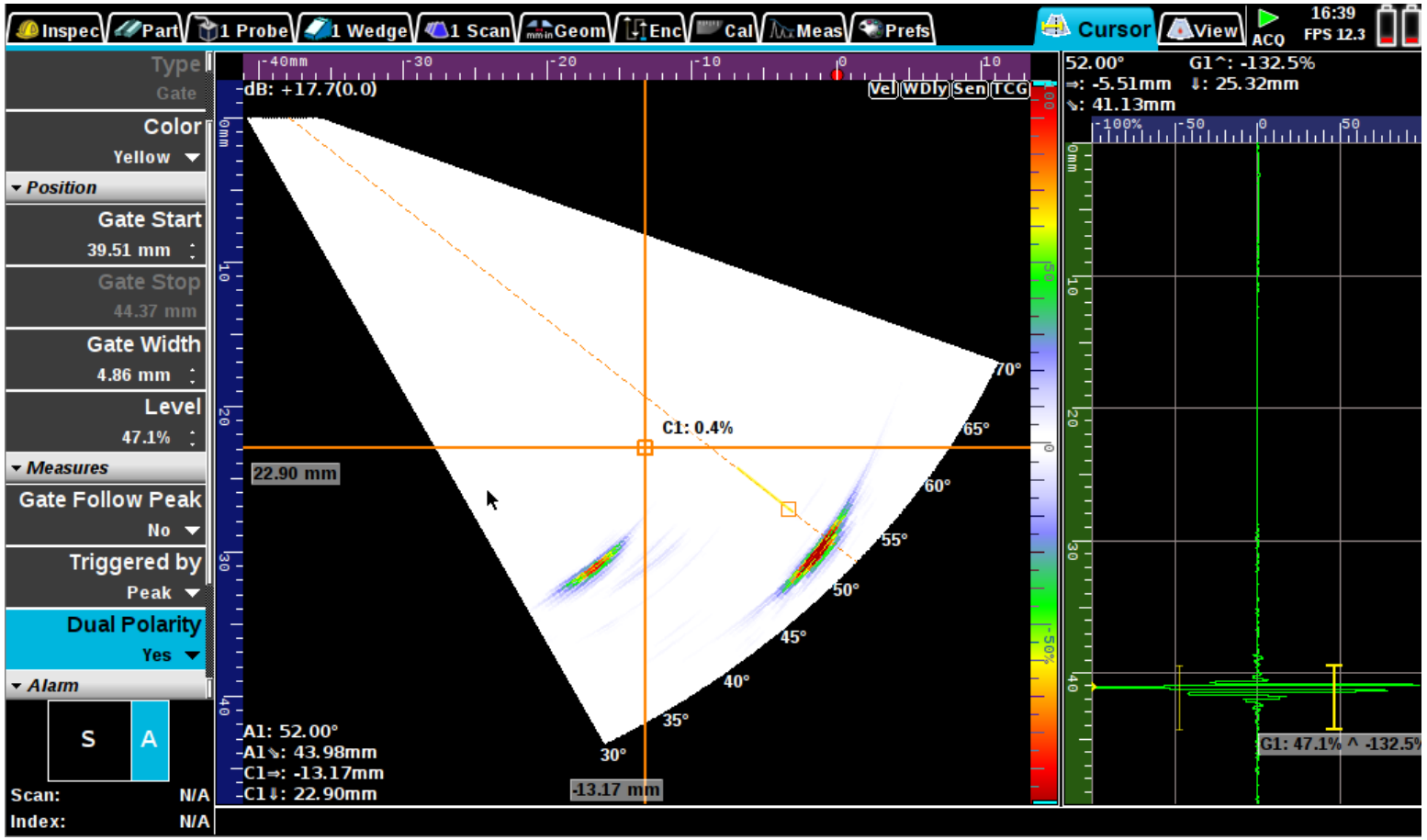
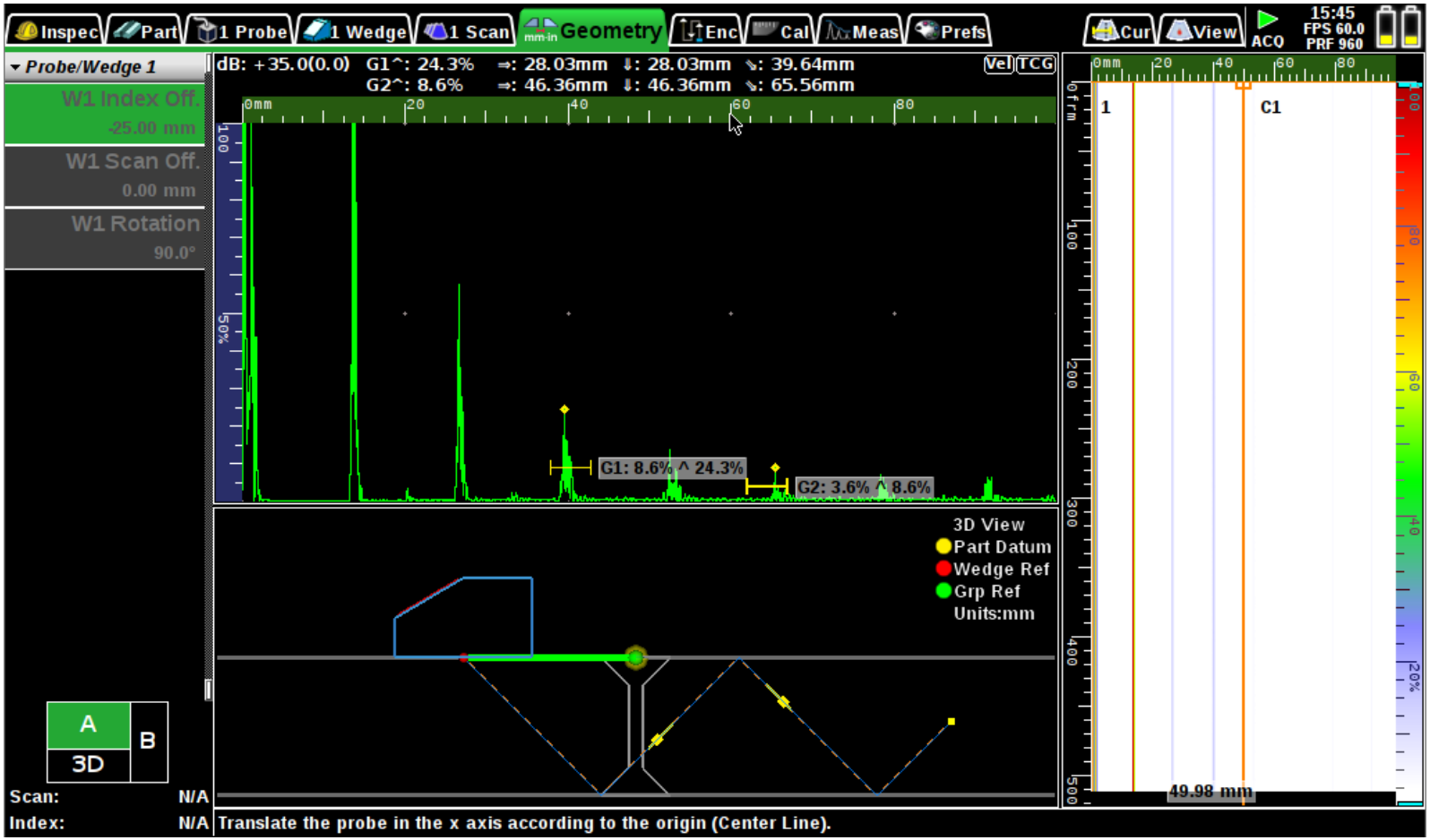


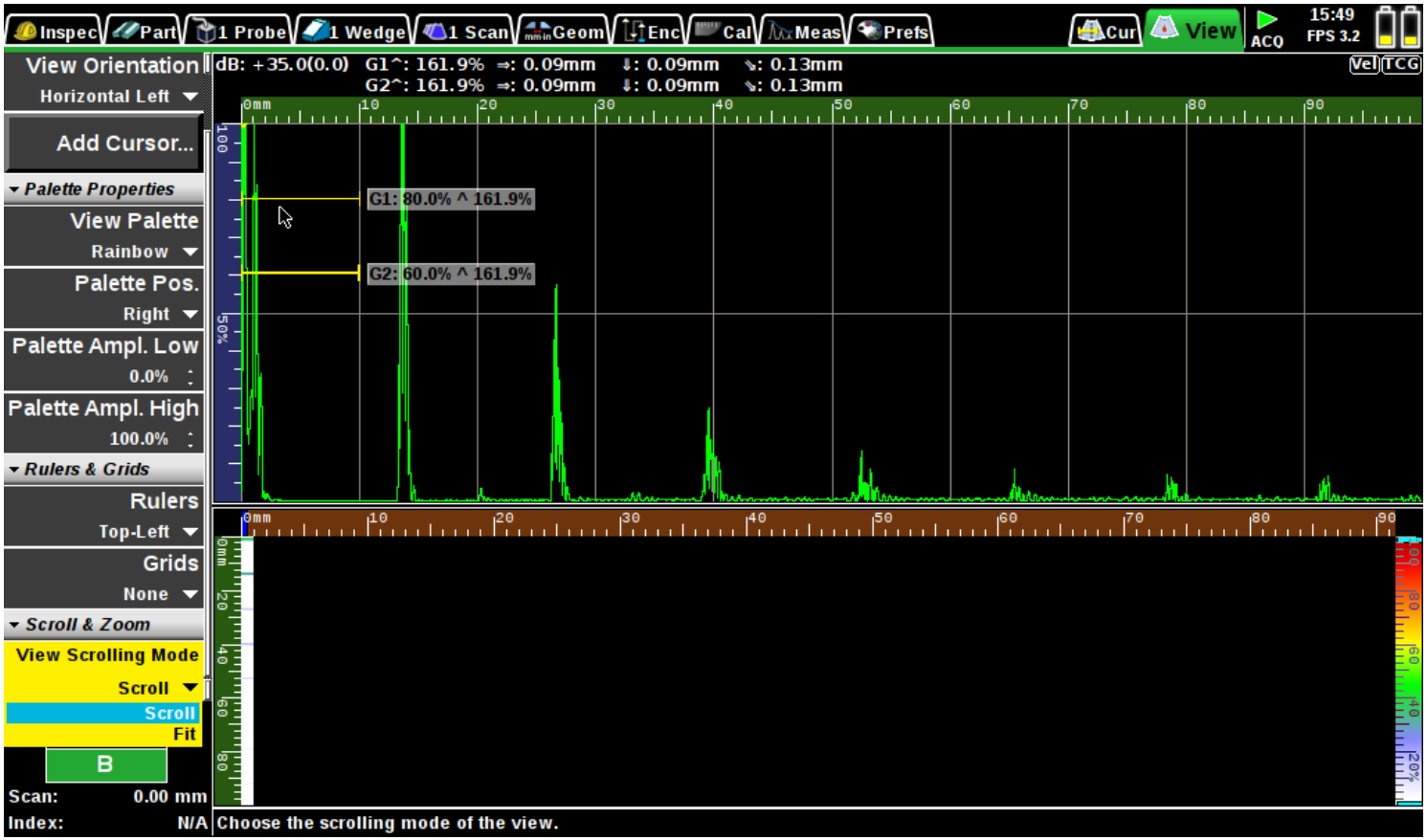
Live 3D View with defect rendering

- *Locate the defect easily*



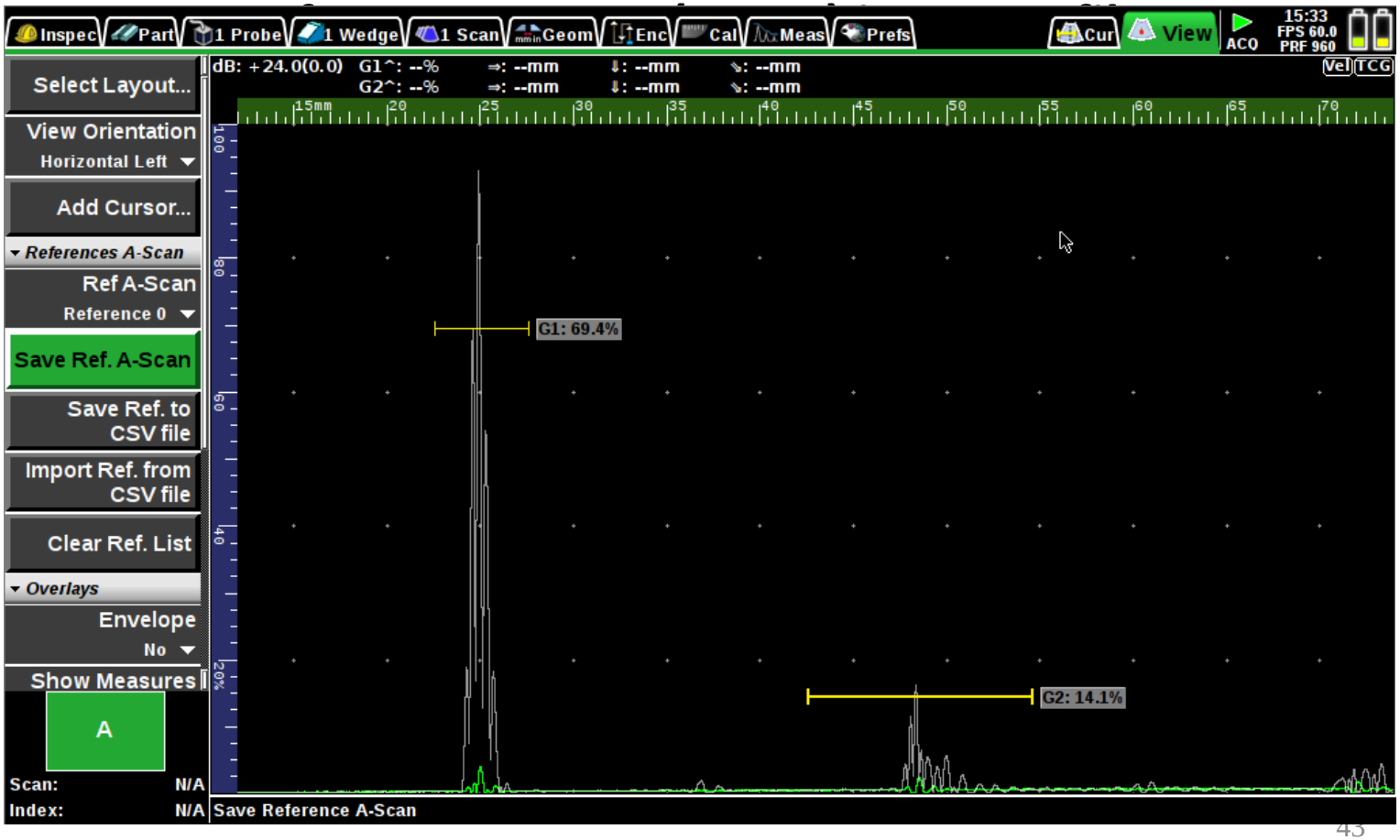
B-Scan and TOFD now support 2 rendering mode

- *Whole area: to see all area in one view*
- *Smooth scrolling: to see defect and missed frame while encoding, even on long strip*



Reference A-Scan

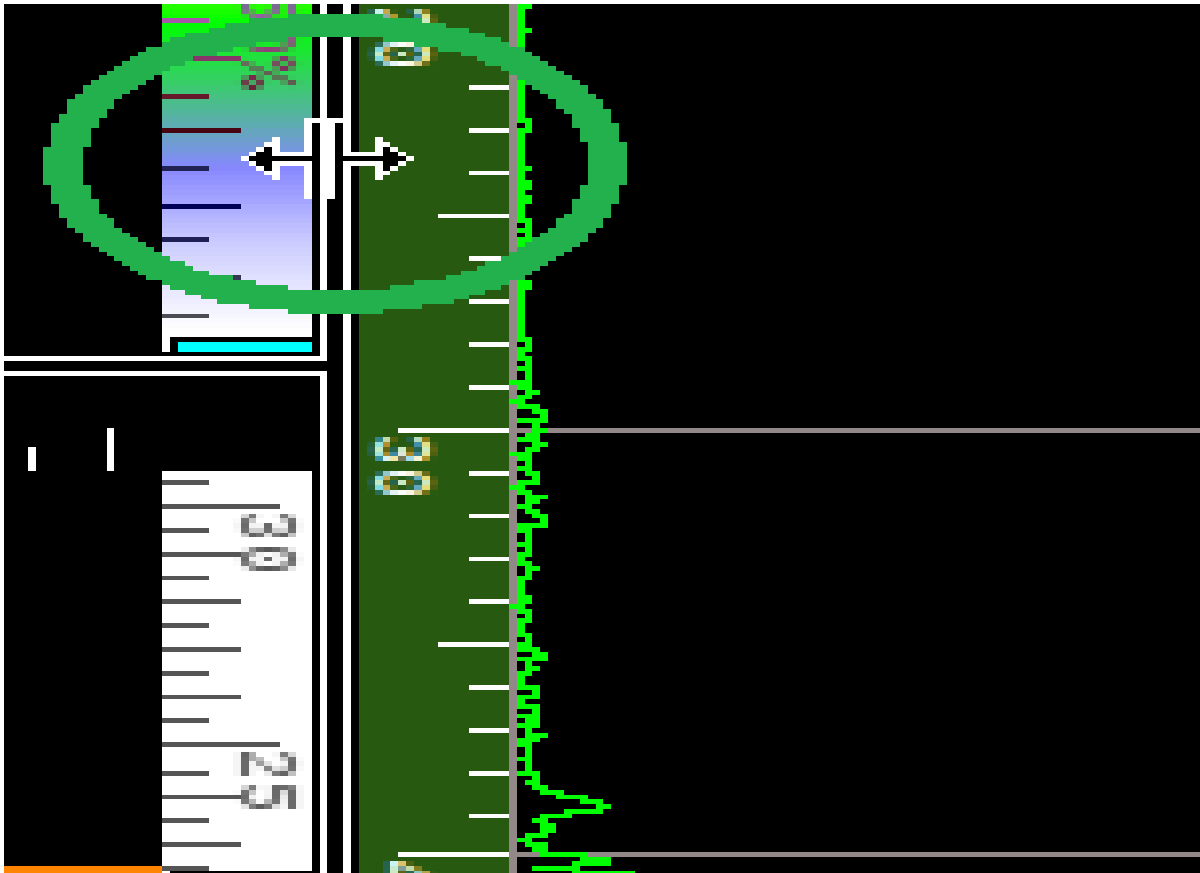
- *Save Reference A-Scan (A-Log) into configuration file (.UTCFG) or into a CSV file*



UT: Hi-PRF mode

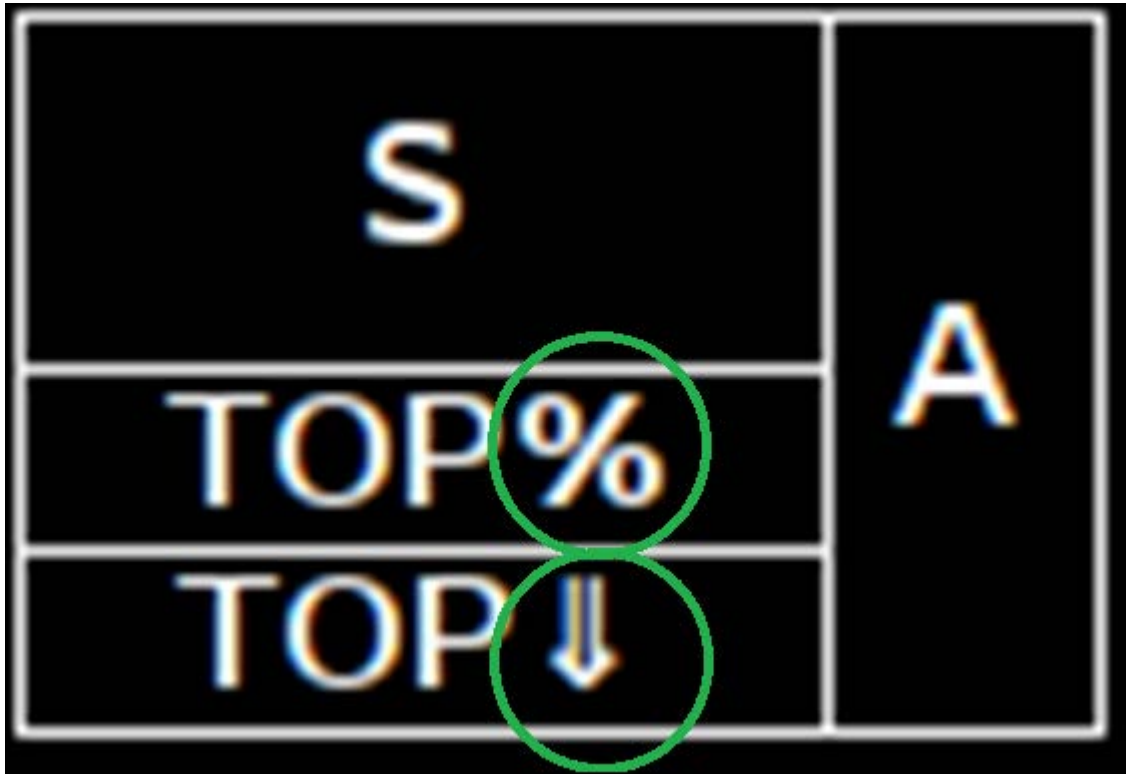
- *A-Scan redraw enhancement, combination of multiple ultrasonic beam at high PRF (>60Hz) using a keep maximum algorithm.*
- *Increase detectability (response time)*
- *Display FPS (Frame per Second) and PRF (Pulse Repetition Frequency) in top right corner of user interface*

Views resizable with mouse



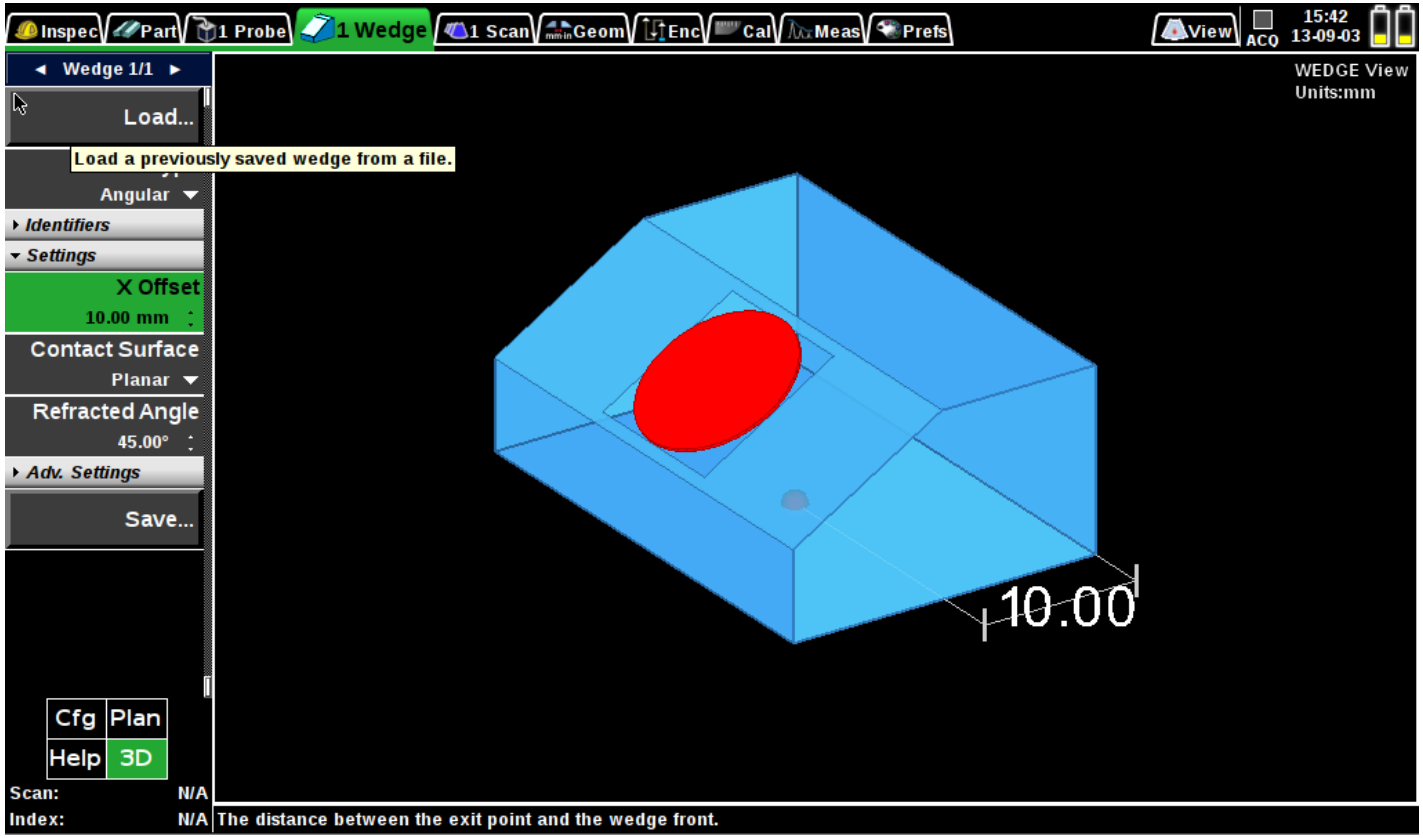
Depth or amplitude mode shown in layout image (Top/End/C)

- ***Depth or amplitude mode shown in layout image (Top/End/C)***



UT configuration as per standard DFD

- Only enter X-Offset and Refracted angle to specify wedge
- Renamed Delay to Zero



DAC/DGS Sub-Menu

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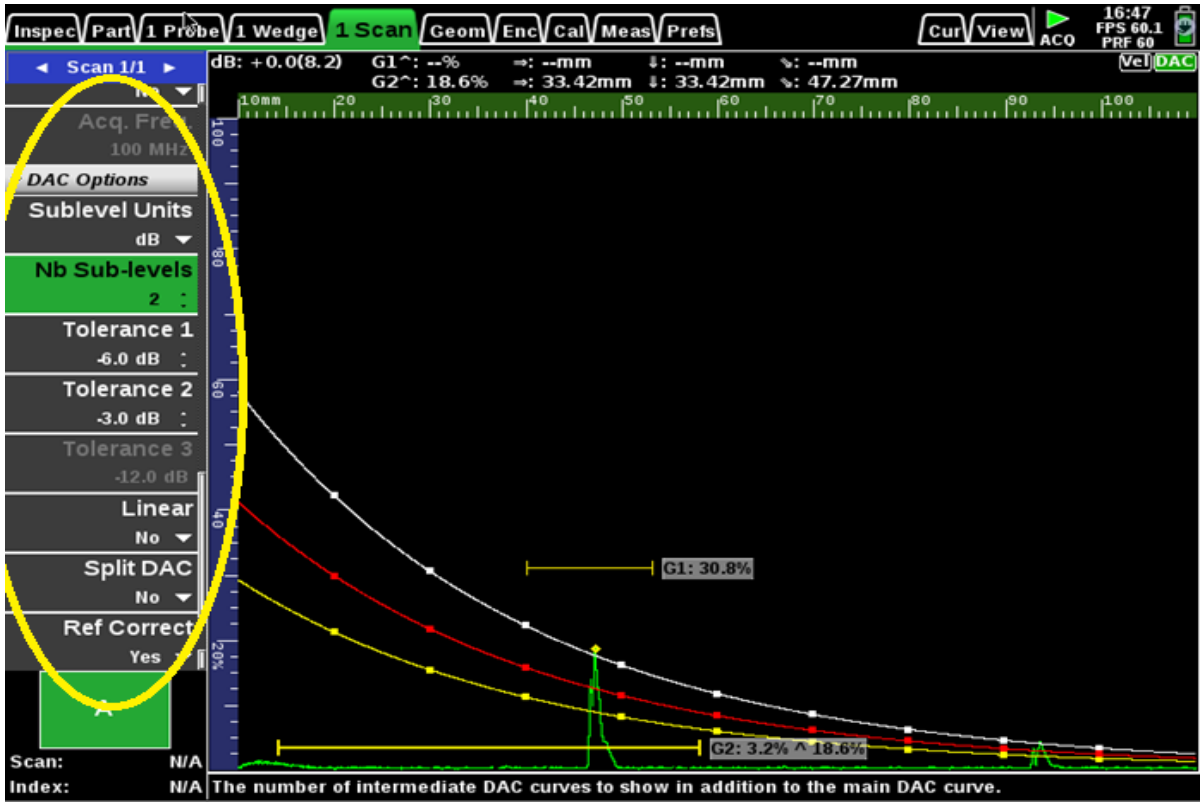
- *"Ref Correct" allows moving the curves when gain is changed*

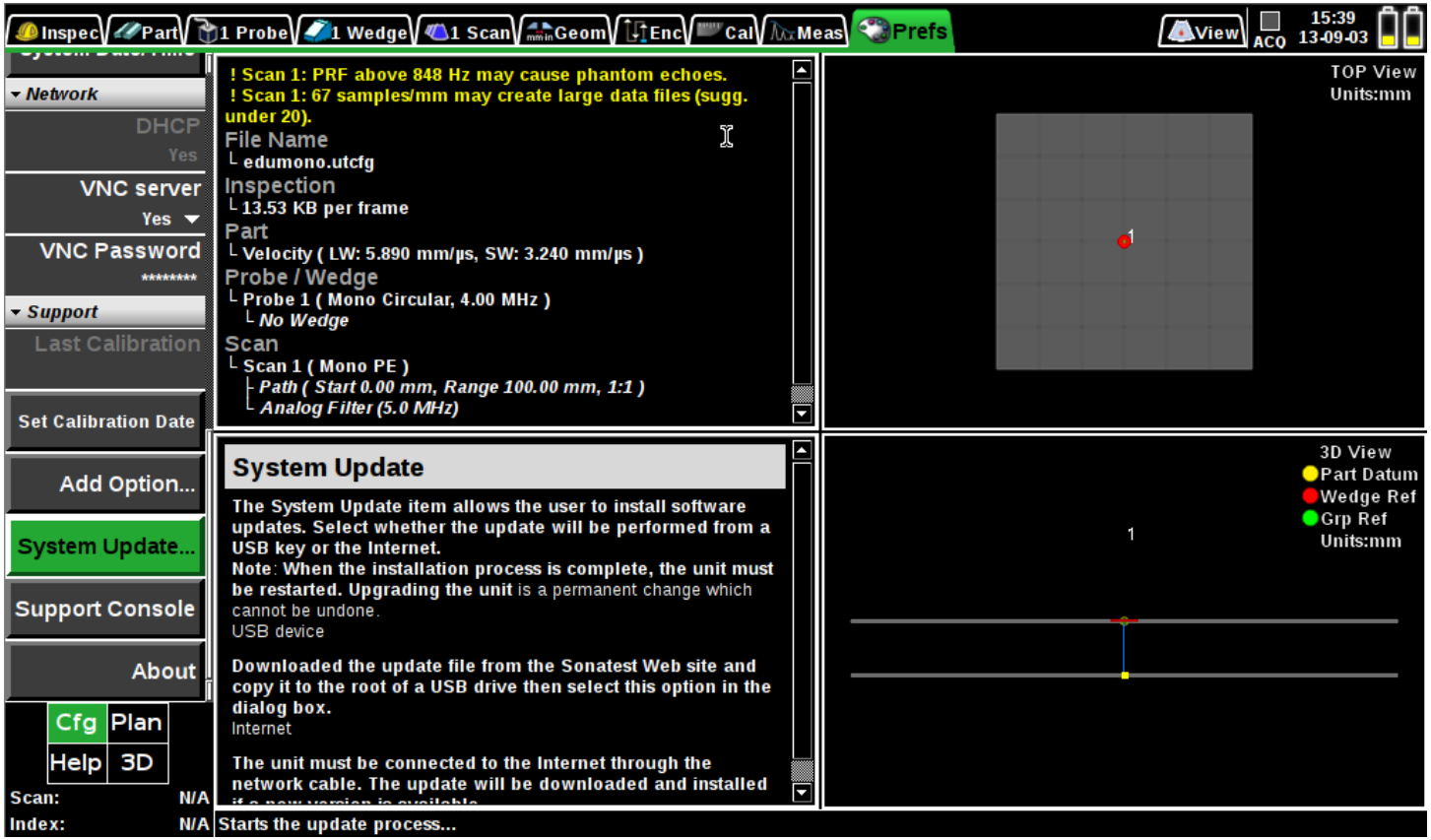


Others

- *Add Italian/Hungarian translation*
- *Added Graphite/Epoxy to material list*

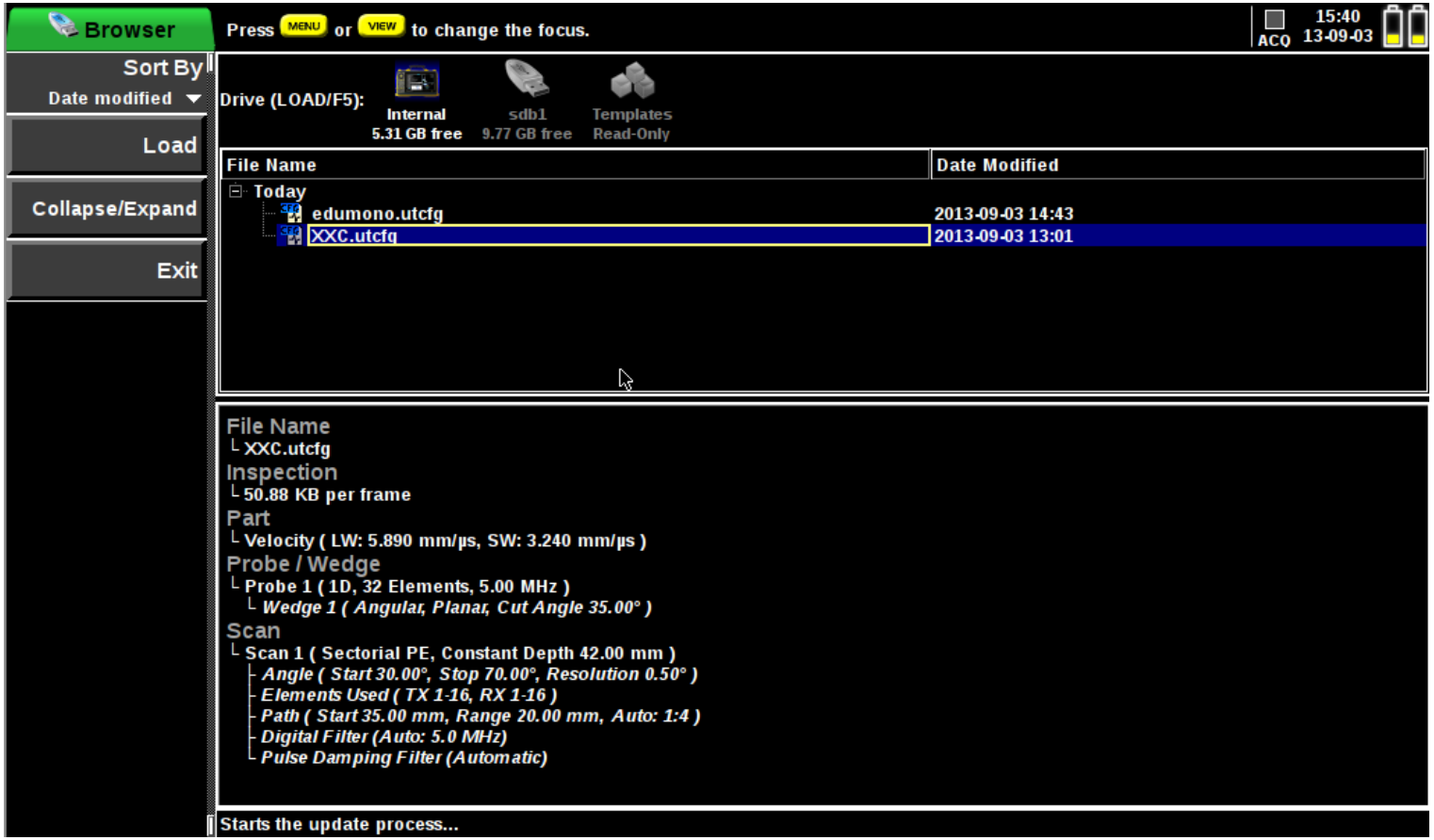
Update with a single button push

- *The Update of the software is now achieved from the application*
- *Only available for next release*



Improved media browser

- *Optimize workflow after acquisition*
- *Saving and loading files is now much easier*



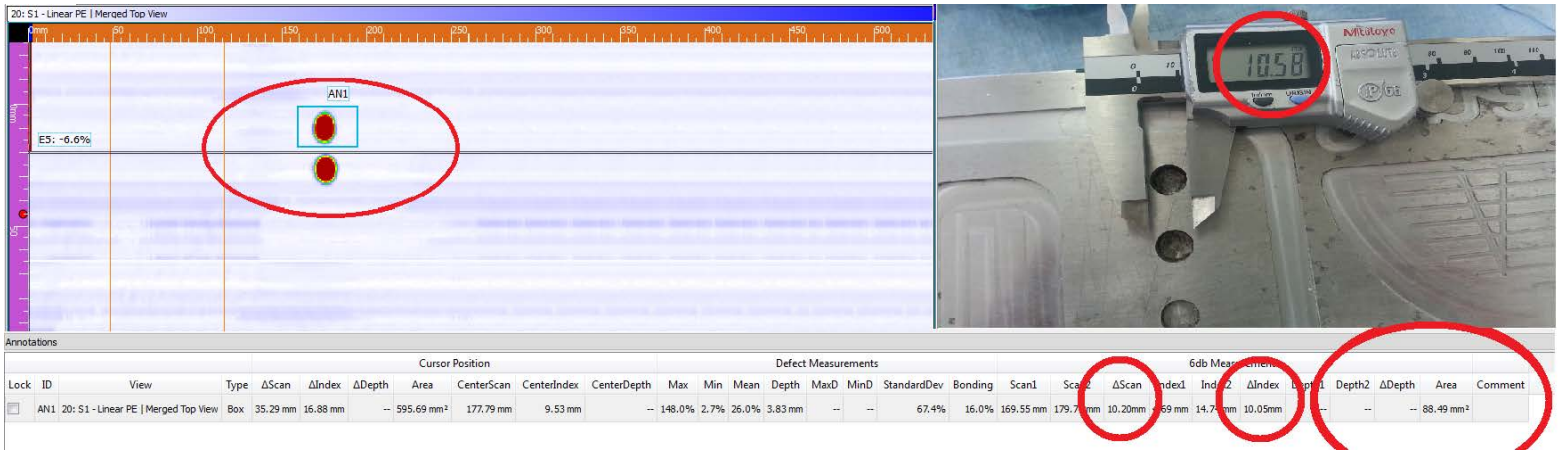
UTStudio

UTStudio List of Enhancements

- UTStudio now opens a new window for each open file
- Sessions are now saved in the UTData file instead of being separate files
- Add Unlink Cursors Feature
- Save data into CSV files (Comma Separated Value) in native acquisition resolution for C-Scan and Merged C-Scan
- Add Annotation Cursor capability (for TOP, Merged TOP, C-Scan and Merged C-Scan):
  - Table of measurements (including: center box position, max X, max Y, 6dB Drop area, Standard deviation, Bonding Ratio)
  - Save annotations to UTData file
  - Save Analysis layout to UTData file
  - Add annotation table to PDF report
  - Use checkboxes for toggle parameters
- Re-arranged right-click menu in views to depend on context
- Palette Editor

UTStudio Annotation Box and Annotation Table

- *Annotation Box can be added in TOP and C-Scan view*
- *Annotations are gathered in the Annotation table with customizable measurements* *(box position and size, box area, -6dB size, -6dB area, comments, …)*
- *This information is saved within the UTDATA file (can reuse later)*
- *PDF Report also contains Annotation table*



Note: UTStudio only